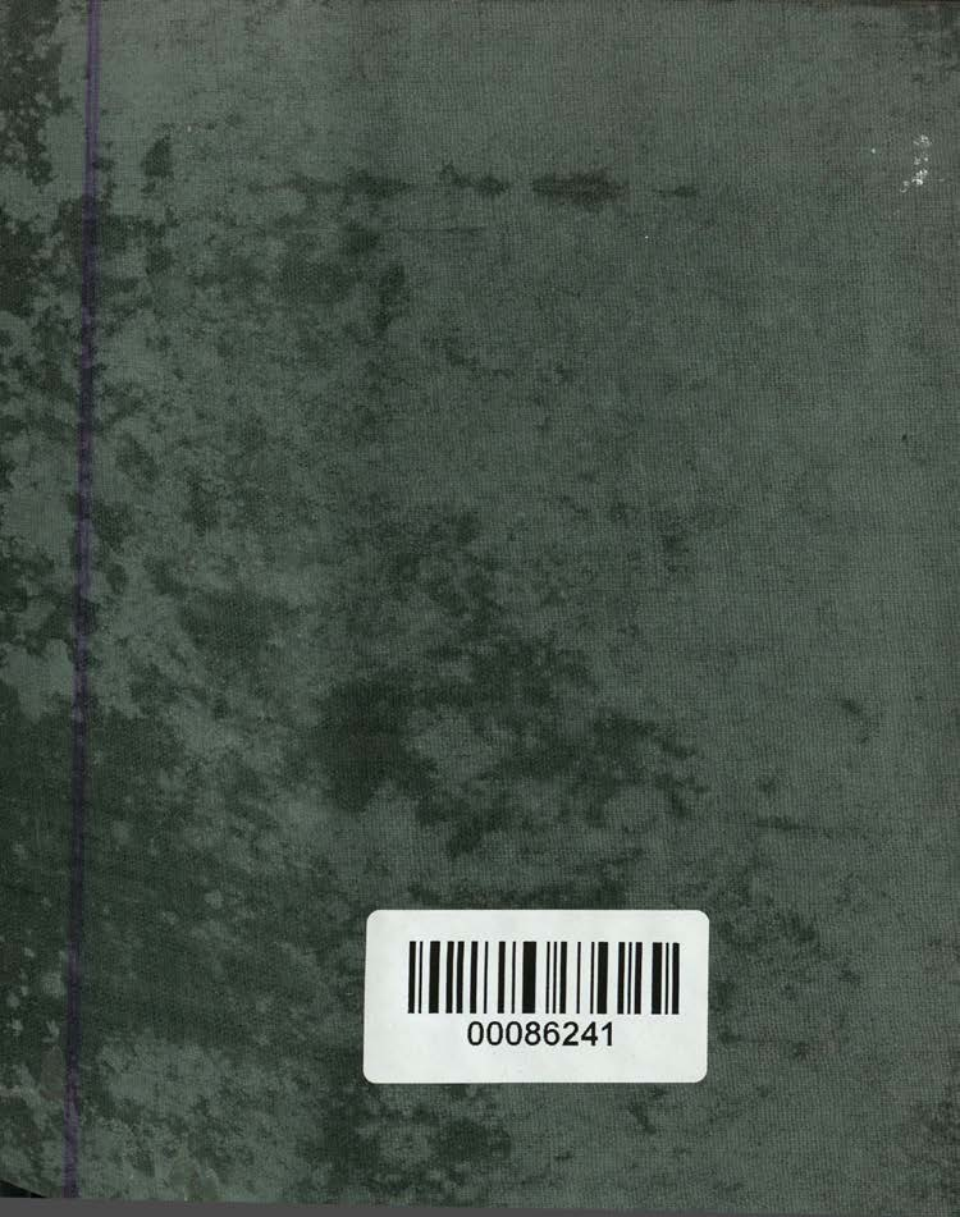

00086241

Digitized with financial assistance from the
Government of Maharashtra
on 02 July, 2018

TATA 3161
xix;29

Title :- Travels in Europe, Africa and Asia, made between the years 1770 and 1779, Vol. IV

year. 1796
3rd ed.

By - CHARLES PETER THUNBERG.

Publisher;- F. & C. Rivington

Place of Publication;- London

Processed at
The Preservation & conservation
Laboratory of
The Asiatic Society of Bombay

Date..Feb-04...

00086241

2. The Cardamomum compactum, and Cubebs.
3. Alpinia, the different Peppers, the Cherimelle and Marmelle.

Oils for *dreſſing Meat*, for *Lamps* and *Candles*.

1. The Siſamum, Camellia japonica, Bignonia tomentoſa, Dryandra, Rhus ſuccedanea and vernix, Taxus baccata and Ginko, Braſſica orientalis, Laurus camphora and glauca, Melia azedarach, Cocoa-nut.

For *Quickſet-Hedges*: The Jatropha curcas, Ophioglosſum ſcandens and Cocoa-tree.

For *Paper*, *Fans*, and *Umbrellas*: The Licuala and Boraſſus.

For *Bottles*: The Cucurbita lagenaria.

For *Lackering*: Gum Lac, from the Croton.

For *Materials for dying*: The Polygonum chinenſe, barbatum and aviculare.

For *Combs*: The wood of the Myrica nagi.

For *Furniture* and various ſorts of *Cabinet* and *Joiner's-Work*: The Pinus ſylveſtris, Cupreſſus japonica, Taxus macrophylla, and Calamander-wood.

For *Cloaths*: Cotton, Silk, and the Urtica nivea.

For *Remedies*: Camphor, Moxa; the Dolichos pruriens, Ariſtolochia indica, Periploca indica, various ſorts of Cinnamon, Lopes-root, the Moringa, Stink-tree, Serpentſtones, the Lignum Colubrinum, Ophi-

 orhiza

86241

orhiza mungos, Rhinoceros's-horn, and a variety of other articles which are noted down ſeparately and by themſelves, for Java, from p. 145 to p. 150.

Japan is in many reſpects a ſingular country, when compared with the different ſtates of Europe. In it we behold a Form of *Government*, which has exiſted without change or revolution for ages; ſtrict and unviolated *Laws*; the moſt excellent *Inſtitutions* and *Regulations* in the towns, the villages, and upon the roads; a *dreſs*, coiffure and cuſtoms, that, for ſeveral centuries, have undergone no alteration; innumerable inhabitants without *parties*, *ſtrife*, or *diſcord*, without *diſcontent*, *diſtreſs*, or *emigrations*; *Agriculture* in a highly flouriſhing ſtate, and a ſoil in an unparalleled ſtate of cultivation; all the *Neceſſaries* of life abounding, even to ſuperfluity, in the land, without any need of foreign commerce; beſides a multiplicity of other advantages.

Among the Rulers of the Country are to be found neither *Throne*, *Sceptre*, *Crown*, nor any other ſpecies of Royal Foppery, which in moſt courts dazzles and blinds the wondering eyes of the ſimple multitude; no Eſtabliſhment of a *Royal Houſehold*, no *Lords in waiting*, nor *Maids of Honor*; no extenſive and magnificent range of *Stables*, no profuſion of *Horſes* and *Elephants*, nor

nor *Maſters of Horſe*, no *Equipages*, *Wheel-Carriages*, nor *Cavalry*; no *Wars* nor *Ambaſſadors*; no *Public Functionaries*, unuſed to or unqualified for their reſpective poſts; no *Corporations*, *Impoſts*, nor other *Monopolies*; no Play nor Coffee-houſes, no Taverns nor Ale-houſes; and conſequently no conſumption of Coffee, Chocolate, Brandy, Wine, Biſhop, or Punch; no privileged *Soil*, no waſte *Lands*, and not a ſingle *Meadow*; no National *Debt*, no *Paper Currency*, no *Courſe* of *Exchange* and no *Bankers*.

Java and *Ceylon* are, in fact, two of the moſt ...inate iſlands on the whole face of the globe, ... reſpect to their ſituation under a warm ...ate, their abundant ſupply of rain, and the ...tility of their ſoil; but the Government of theſe iſlands is of various kinds, always deſpotic, and the Religion, for the moſt part, Mahometaniſm; whereas the happineſs of the people muſt be in a reſtraint which renders them ſtupid and ſuperſtitious, cringing and rebellious, poor and ſlothful, conſtantly objects of commiſeration; and this wretched ſtate has been rendered the more oppreſſive to them, inaſmuch as the Europeans, who trade with them, have, by their ſuperior information, their Chriſtianity and Humanity, in the laſt centuries, neither melio...ted their condition, nor made their fetters ſit

lighter upon them; but rather, by their inſatiable avarice, aggravated their yoke, and increaſed both the degree and number of their unmerited ſufferings. And, indeed, how is it poſſible for the people of a country to be happy, where no law obtains but the caprice of individuals; where the life of man is not more regarded than that of the brute creation; where there is no ſecurity, nor real property, and where there is ſcarcely the leaſt idea of liberty, or of great and noble actions?

During the ſpace of nine years, which I ſpe[nt] in foreign countries, I have had many deſira[ble] and happy opportunities of diſcovering and [col]lecting new and hitherto unknown treaſures f[rom] the exhauſtleſs mine of Nature. Thoſe, which I have already been enabled to arrange and de-ſcribe, amount to a conſiderable number; the new animals to nearly 400, the new genera of plants, to 75, and the ſpecies of plants to upwards of 500; not to mention all thoſe, which I ſtill keep by me for farther examination.

On my arrival in Stockholm, in the month of April, 1779, I had the honor, at the Levee in Drotningholm, and ſtill farther afterwards on the ſame day, in a private audience, to render an account to a great and gracious King of the general termination of my foreign Travels abroad

the

the moſt remarkable things and occurrences in them, eſpecially with reſpect to the almoſt unknown country of Japan, of my own private adventures, and the diſcoveries, which might be conſidered as being in a greater or leſs degree uſeful.

During my abſence I had, on the 31ſt of May, 1777, been appointed by the Privy-Counſellor RUDENSCHIOELD, Chancellor of the Univerſity of Upſal, Botanical Lecturer at that Univerſity, to which office I now received my patent from the hands of my Patron, the King's firſt Phyſician, the Chevalier BAERS. March 5th, 1781, on occaſion of Profeſſor LINNÆUS's making a tour into foreign parts, I was appointed Overſeer of the Botanical Garden, and to preſide over the public Lectures. November the 7th, 1781, I received his Majeſty's Patent to be Profeſſor Extraordinarius, together with an increaſe of ſalary. September 7th, 1784, I was appointed Ordinarius Medicinæ Profeſſor, and Profeſſor of Botany. In the ſame year, I had the honor to be elected Preſident of the Academy of Sciences in Stockholm. In June, 1785, I was choſen Rector of the Academy in Upſal, and on the 21ſt of November of the ſame year, was created a Knight of the Royal Order of Vaſa.

Divers foreign Philoſophical Societies have at different times done me the honor to chuſe me a Member of their Learned Aſſociations.

The

The IMPERIAL is Natur. Curiosor.
The NORWEGIAN Society, 1772, October 17.
The LUNDEN Physiogr. 1773, December 8.
The UPSAL Society, 1777.
The STOCKHOLM Society of Sciences, 1780.
The HAARLEM Society, 1781, May 21.
The AMSTERDAM Society, 1781.
The STOCKHOLM Oeconom. Patr. 1782, March 16.
The MONTPELIER, 1784, July 1.
The PARISIAN Society of Agriculture, 1785, July 7.
The ZEELAND Society in Flushing, 1785.
The BERLIN Soc. Nat. Scrut.
The EDINBURGH Nat. Stud. 1786, May 4.
The EDINBURGH Medical Society.
The FLORENTINE, 1787, Feb. 7.
The PARISIAN Academy of Sciences, 1787, September 5.
The HALLE Soc. Nat. Scrut. 1787, May 12.
The LONDON Royal Society, 1788.
The LONDON Linnæan Soc. 1788, March 8.
The LONDON Medical Soc. 1789.
The BATAVIAN Ind. Orient.
The PARISIAN Society of Nat. History, 1791, January 7.
The PHILADELPHIAN Society, 1791, April 15.
The COPENHAGEN Society of Nat. History, 1792, June 8.

The

The Works I publiſhed after my return home, were as follows:

1ſt, My TRAVELS, in four Volumes, printed at Upſal, between the years 1788 and 1793. Tranſlated into German, at Berlin; into Engliſh, at London, and into French, at Paris.

2dly, My INAUGURAL ORATION, on the Species of Coin that have been ſtruck in Japan, held before the Academy of Sciences at Stockholm, the 25th of Auguſt, 1779. Tranſlated into Dutch, and printed at Amſterdam in 1780, and afterwards into German in 1784.

3dly, My SPEECH, on laying down the office of Preſident in the Stockholm Academy of Sciences, on the Japaneſe nation, Nov. 3, 1784. Tranſlated into German by Stridſberg, Francfort, 1785.

4thly, My ORATION in COMMEMORATION of the Aſſeſſor and Provincial Phyſician, Doctor MONTIN. Stockholm, 1791, 8vo.

5thly, FLORA JAPONICA, printed at Leipſic, 1784, 8vo. with 39 Plates.

6thly, My ACADEMICAL DISPUTATIONS have been as follows:

1. De venis reſorbentibus. Præſ. C. v. LINNÉ. 1767. 4.
2. De Iſchiade. Præſ. J. SIDRÉN. 1770.

3. De

3. De Gardenia. Reſp. DJUPEDIUS. 1780. Tab. 2. Recenſerad i Upſ. Salſk. Tidn. 1781. No. 49.
4. De Protea. Reſp. GEVALIN. 1781. Tab. 5.
5. Oxalis. Reſp. HAST. 1781. Tab. 2.
6. Nova Plantarum genera. P. 1. Reſp. C. HORNSTEDT. 1781. Tab. 1.
7. Novæ Inſectorum Species. p. 1. Reſp. CASSTROM. 1781. Tab. 1.
8. Nova Plantarum genera. p. 2. Reſp. SAHLBERG. 1782. Tab. 1.
9. Iris. Reſp. EKMAN. 1782. Tab. 2.
10. Novæ Inſectorum Species. p. 2. Reſp. EKELUND. 1783. Tab. 1.
11. Nova Plantarum genera. p. 3. Reſp. LODIN. 1783. Tab. 1.
12. Ixia. Reſp. RUNG. 1783. Tab. 2.
13. Novæ Inſectorum Species. p. 3. 1784. Tab. 1. Reſp. LUNDAHL.
14. Novæ Inſectorum Species. p. 4. 1784. Tab. 1. Reſp. ENGESTROM.
15 Gladiolus. Reſp. AIMELÆUS. 1784. Tab. 2.
16. Nova genera Plantarum. p. 4. Reſp. BERG.
17. Nova genera Plantarum. p. 5. Reſp. BLUMENBERG. 1784. T. 1.
18. Inſecta Svecica. p. 1. Reſp. BORGSTROM. 1784. Tab. 1.
19. Aloë Reſp. HESSELIUS. 1785.
20. Medicina Africanorum. Reſp. BERG. 1785.

21. Erica.

21. Erica. Reſp. STRUVE. Tab. 6. 1785.
22. Ficus. Reſp. GEDNER. 1786. t. 1.
23. Muſeum Natural. Acad. Upſ. p. 1. Reſp. RADLOFF. 1787.
24. - - - - p. 2. Reſp. HOLMER. 1787.
25. - - - - p. 3. Reſp. EKEBERG. 1787.
26. Muſeum Natural. Acad. Upſ. p. 4. Reſp. BJERKÉN. 1787. Tab. 1.
27. - - - - p. 5. Reſp. GALLÉN. 1787.
28. Moræa. Reſp. ZACH. COLLIANDER. 1787. Tab. 2.
29. Muſeum Natural. Acad. Upſ. p. 6. Reſp. SCHALÉN. 1788. Tab. 1.
30. Reſtio. Reſp. PETR. LUNDMARK. 1788. Tab. 1.
31. Arbor toxicaria Macaſſarienſis. 2. Reſp. AJMELÆUS. 1788.
32. Moxæ atque ignis in Medicina rationali Uſus. Reſp. HALLMAN. 1788.
33. Myriſtica. Reſp. RADLOFF. 1788.
34. Caryophylli Aromatici. Reſp. HAST. 1788.
35. Muſeum Natural. Acad. Upſ. p. 7. Reſp. BRANZELL. 1789.
36. Characteres generum Inſectorum. Reſp. TORNER. 1789.
37. Muſeum Natural. Acad. Upſ. p. 8. Reſp. RADEMINE, 1789.
38. Novæ Inſectorum Species. p. 5. Reſp. NORÆUS. 1789. Tab. 1.

39. Muræna

39. Muræna et Ophichtus. Reſp. AHL. 1789, Tab. 2.
40. Remedia nonnulla indigena. Reſp. HOLMER. 1790.
41. Muſeum Natural. Acad. Upſ. Append. 1. Reſp. LUNDELIUS. 1791.
42. Muſeum Natural. Acad. Upſ. Append. 2. YMAN. 1791.
43. Muſeum Natural. Acad. Upſ. p. 9. Reſp. EKELUND. 1791.
44 Novæ Inſectorum Species. p. 6. Reſp. LAGUS. 1791.
45. Muſeum Natural. Acad. Upſ. p. 10. Reſp. KUGELBERG. 1791.
46. Flora Stregneſenſis. Reſp. CARLSON. 1791.
47. Inſecta Svecica. p. 2. Reſp. BECKLIN. 1791. Tab. 1.
48. - - - p. 3. Reſp. AKERMAN, 1792.
49. - - - p. 4. Reſp. SEBALDT. 1792. Tab. 1.
50. Genera nova Plantarum. p. 6. Reſp. STROM. 1792.
51. - - - p. 7. Reſp. TRAFVENFLDT. 1792.
52. Muſeum Natur. Acad. Upſ. p. 11. Reſp. SJOBERG. 1792.
53. - - - p. 12. Reſp. LINDBLADH. 1792.
54. - - - p. 13. Reſp. FERELIUS.

7thly,

7thly, TREATISES on Miſcellaneous Subjects, ſent in to different learned Societies.

* *To the Academy of Sciences at* STOCKHOLM,

1. An accident, that happened from White-lead being uſed in food, through miſtake, 1773. 1ſt qu. p. 29.
2. Deſcription of a curious and unknown Muſhroom, the HYDNORA AFRICANA. 1775. 1ſt. qu. p. 69. Plate.
3. Deſcription of a new Genus of Inſects, the PNEUMORA. 1775. 3d. qu. p. 254. Plate.
4. ROTHMANNIA, a new Genus of Plants, 1776. 1ſt qu. p. 65. Plate.
5. Deſcription of a new Genus of Plants, called RADERMACHIA. 1776. 3d. qu. p. 250.
6. Remarks on the HYDNORA AFRICANA, 1777. 2d. qu. p. 144. Plate.
7. Deſcription of a BEZOAR EQUINUM. 1778. 1ſt qu. p. 27.
8. A new and, with reſpect to its Genus, hitherto unknown Graſs, called the EHRHARTA. 1779. 3d. qu. p. 216. Plate.
9. Obſervations upon CINNAMON, made at Ceylon, 1780. Tranſlated and inſerted into the Tranſactions of the Fluſhing Society. Tom. 12. Part 1. by Dr. HOUTUYN. p. 296.

10. Deſcription of the WEIGELIA JAPONICA, a ſcarce Plant from Japan. 1780. 2d. qu. p. 137.

11. Deſcription of ſome WARM BATHS in Africa and Aſia. 1781. 1ſt qu. p. 78.

12. Deſcription of two new INSECTS. 1781. 2d. qu. p. 168.

13. NOCTUA *Serici*, a new Silk-Worm. 1781. 3d. qu. p. 240. Plate.

14. Deſcription of two Species of genuine NUTMEG, from the iſland of Banda. 1782. 1ſt. qu. p. 46. Plate.

15. Some Obſervations in ORNITHOLOGY. 1782. 2d. qu. p. 118.

16. Deſcription of a new Genus of Plants, the FAGRÆA *Ceilanica*. 1782. 2d. qu. p. 132. Plate.

17. On the *Oil* of CAJOPUT, and its uſe in Medicine. 1782. 3d. qu. p. 223.

18. NIPA, a new Genus of Palm-tree. 1782. 3d. qu. p. 231.

19. On PALM-TREES in general, and particularly on the Licuala Palm. 1782. 4th. qu. p. 284.

20. Deſcription of the HOUTUYNIA *cordata*, a Japaneſe Genus of Plants. 1783. 2d. qu. p. 149. Plate.

21. Farther Obſervations on ASTERIAS. 1783. 3d. qu. p. 224.

22. De-

22. Deſcription of the MINERALS and PRECIOUS STONES of Ceylon. 1784. 1ſt. qu. p. 70.
23. Obſervations on BIRDS of the *Loxia* kind, at the Cape of Good Hope. 1784. 4th. qu. p. 286.
24. Obſervations on and Deſcription of the Genus of Plants called ALBUCA. 1786. 1ſt. qu. p. 57.
25. Obſervations on the Plants called ORCHISES, 1786. 4th. qu. p. 254.
26. Deſcription of ſome rare and unknown Species of Lizards, 1787. 2d. qu. p. 123. Plate.
27. Deſcription of three ſpecies of TORTOISE. 1787. 3d. qu. p. 178.
28. Deſcription of the WILDENOVIA, a rare and new Species of Graſs. 1790. 1ſt. qu. p. 26. Plate.
29. Deſcription of two FISHES from Japan. 1790. 2d. qu. p. 106. Plate.
30. Deſcription of the WAHLBOMIA INDICA. 1790. 3d. qu. p. 215. Plate.
31. Two foreign Fiſhes, the GOBIUS *patella*, and SILURUS *lineatus*. 1791. 3d. qu. p. 190. Plates 6.
32. Two Japaneſe Fiſhes, the CALLIONYMUS *Japonicus*, and the SILURUS *lineatus*, 1792. 1ſt. qu. p. 29. Plate 1.

33. Deſcription of the unknown Fiſhes, the PERCA 6-*lineata* and *picta*. 1792. 2d. qu. p. 141. Plates 5.

β. To the Literary Society in UPSAL.

1. Cycas Caffra. 1775. cum figuris. Vol. 2.
2. KÆMPFERUS illuſtratus. p. 1. 1780. Vol. 3.
3. Cuſſoniæ Genus. 1780. c. f. Vol. 3.
4. Novæ Species Inſectorum Sveciæ. 1783. c. f. Vol. 4.
5. KÆMPFERUS illuſtratus. p. 2. 1783. Vol. 4.
6. Curculio Cycadis. 1783. Vol. 4.
7. Deſcriptiones Inſectorum Svecicorum. 1792. Vol. 5. p. 85.
8. Obſervationes in Linguam Japonicam. 1792. Vol. 5. p. 258.

γ. To the Phyſiographical Society in LUNDEN.

1. Retzia capenſis. 1776. cum figuris.
2. Montinia et Papiria.
3. The Preparation of Gum Aloë in Africa.
4. Aitonia capenſis.
5. Falkia repens.
6. Syngnathi nova Species.

δ. To the Norwegian Society in TRONDHEIM.

1. Hypoxis.
2. Cliffortiæ Genus.

To the Society of Sciences at HAARLEM.

1. Obſervationes Thermometricæ in Japonia habitæ.
2. Cryptogamarum fructificatio in Cycade et Zamia.

To the Royal Society at LONDON.

1. Account of a Voyage to Japan.
2. Citodium, or the Oeconomical Uſes and Preparation of the Bread-fruit.

To the Imperial Society Naturæ Curioſorum:

1. Craſſulæ novæ Species 28.
2. Meſembryanthemi Species novæ 21.

To the Society Naturæ Scrutatorum at BERLIN.

1. Dilatris genus.

To the Society of Natural Hiſtory at PARIS.

1. A new Genus of Plants, called the BOSCIA *undulata.*
2. Deſcription of 13 Species of Japaneſe and 341 Cape Plants, before unknown.

THE

TRANSLATOR'S

PREFACE.

AFTER the warm reception the preceding Volumes have met with from the public, it would be needleſs to ſay any thing in recommendation either of the Work or its Author. It may ſuffice to obſerve, that this Volume is much more intereſting than any of the former; and that, if any thing be wanting to make it complete on the ſubjects of which it treats, the Reader will find the deficiency amply ſupplied, in a little Tract, lately publiſhed, entitled "The Life and Adventures of Chriſtopher Wolf, with his Voyage to Ceylon;" particularly with reſpect to the Vegetable Productions of that iſland, the Rollewai, the Elephant, and the manner in which this latter animal is captured.

For the Fourth Volume.

PLATE I.

Fig. 1. A *Japaneſe Slipper*. Theſe are uſed every day in common, inſtead of Shoes.

2. *Another*, which is uſed on Journies, and is tied faſt round the foot.

3. A *Horſe-Shoe*, which is tied round the foot.

4. A *Raſor-Caſe*. *a*. The Caſe itſelf, for two Razors, and *b*. the *Razor*.

5. A *Medicine-Box*, with ſeveral compartments in it. *a*. The *Box*, with its partitions. *b*. The *Cord*, by which it is ſupported. *c*. The *Ball*, by which it is made faſt to the belt.

PLATE II.

Fig. 1. A *Japaneſe Lady*, with *a*. her *Lute*, in her uſual dreſs.

2. *Touche*, or *Japan-Ink*, with which the Japaneſe and Chineſe uſually write, and which they uſe inſtead of ink.

3. A *Box*, which contains *a*. a *Reckoning-board*, with moveable *Counters*, ſtrung upon a ſteel-wire, denoting Units and Decimals; *b*. a *Steel-yard*, together with its *Scale*, and *c*. the *Weight* hanging to it; *d*. *e*. an excavated *Stone* to rub the Touche upon; *f*. a *little Trough*, for holding water for that uſe, and *g*. a *Writing-pencil*.

PLATE

Explanation of the Plates.

PLATE III.

Fig. 1. A *Steel-yard* with its Caſe. *a.* The *Caſe*, which ſhuts up with great eaſe and convenience. *b.* The *Steel-yard* itſelf, formed of ivory. *c.* The *Scale* with its Strings. *d.* The *Strings*, by which the Steel-yard is held, when uſed. *e.* The *Weight.*

2. A *Tooth-bruſh*, of ſoft wood, to clean the teeth with.

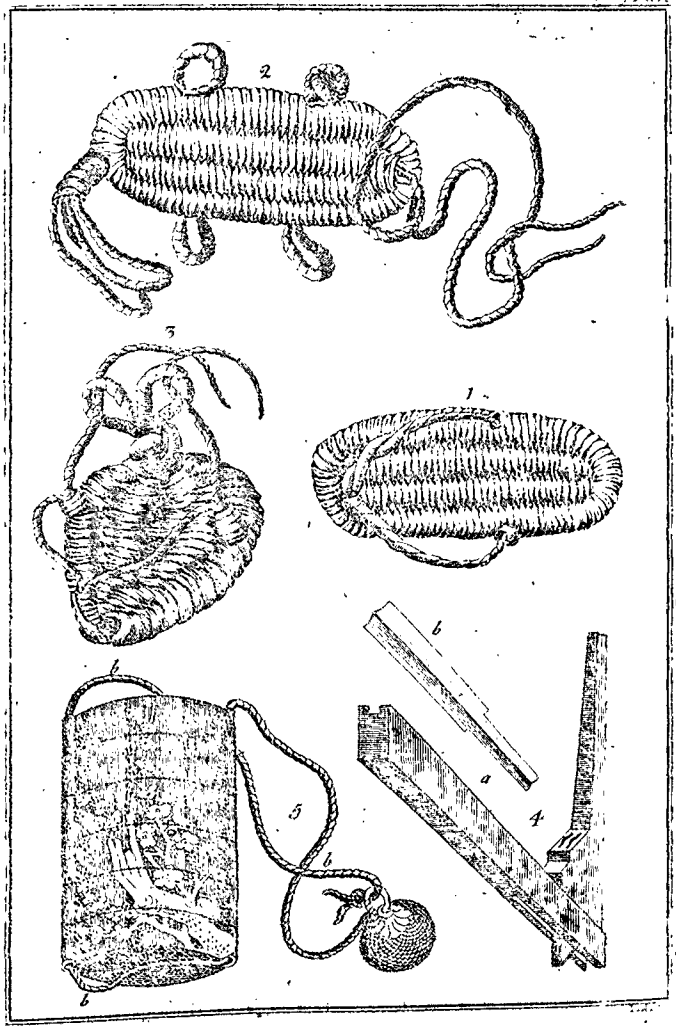
3. A common *Writing-pencil*, made of a reed and hare's hair.

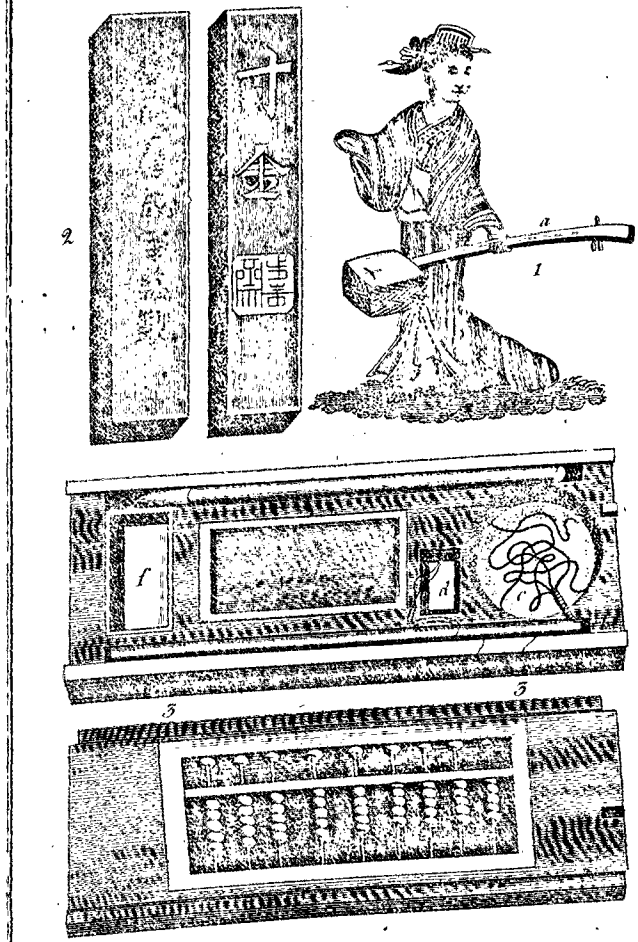
4. A *Spring Steel-yard*, or *Weight* upon a Spring, which is very elaſtic, for weighing ſmaller articles.

PLATE IV.

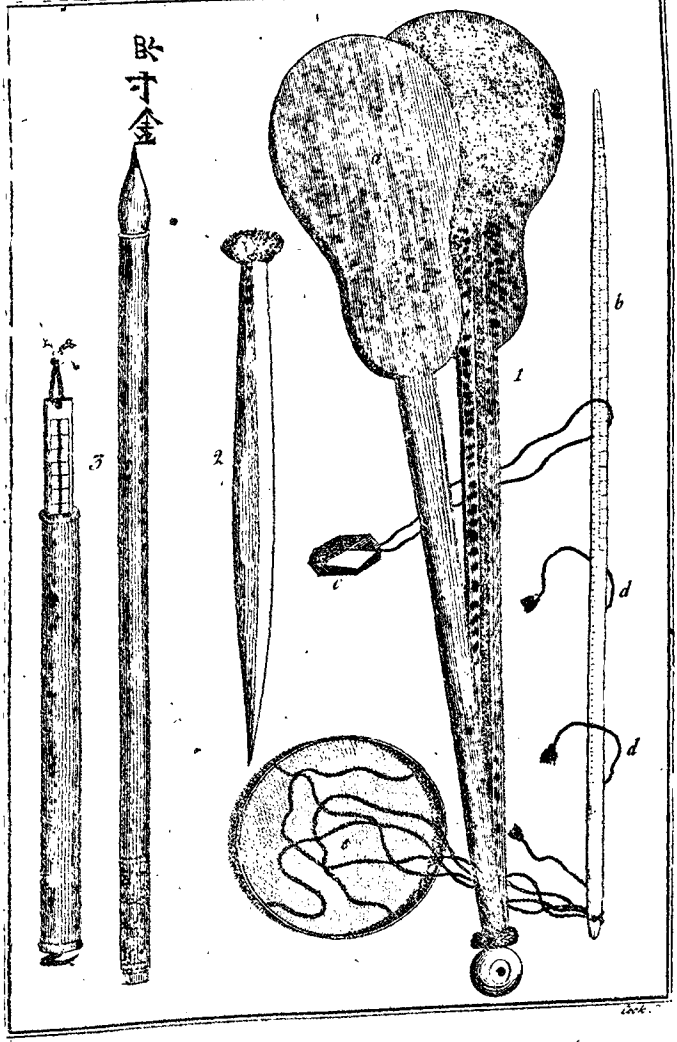
Fig. 1. A *Tobacco-pouch*, with a Pipe and its Sheath. *a.* The *Pipe-ſheath*, made of ſilk. *b.* The *Pipe* in its ſheath. *c.* The *Pipe* made of a reed, with a mouth-piece and bowl of metal. *d.* The *Tobacco-pouch*, made of ſilk.

2. A *Caſe* for Inſtruments for the Ears and Teeth. *a.* The *Caſe*, made of horn. *b.* The *String*, by which it is faſtened to the belt. *c. Ornaments* of Silk. *d.* Divers ſmall *Inſtruments*, to clean the ears and teeth with.

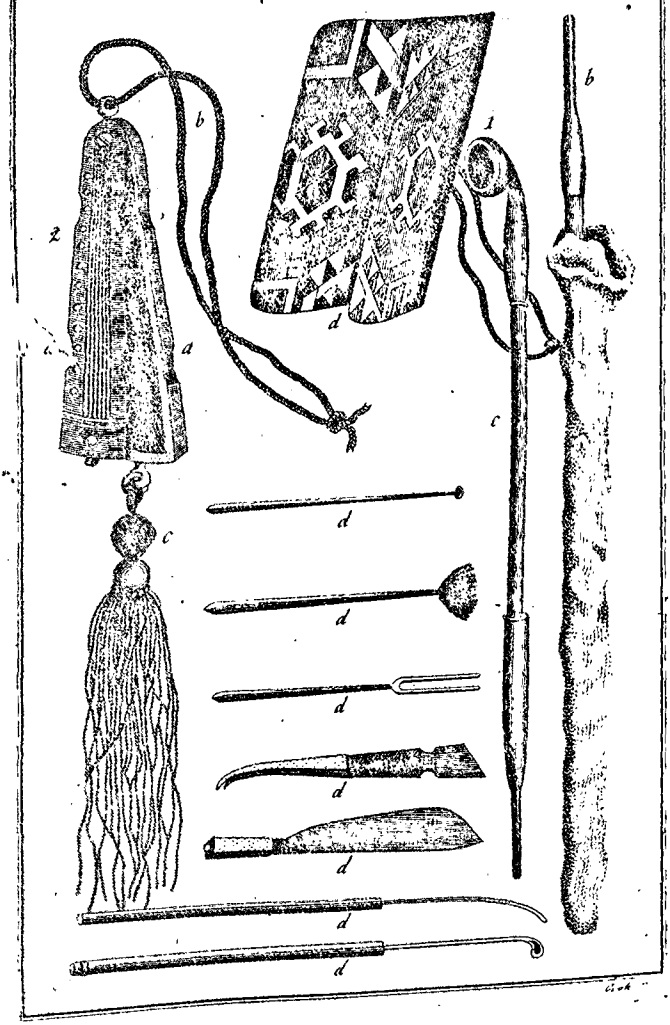

2
3
1
b
b
a
4
b
5
b
b


2
a
1
f
d
3
3

Pl. III.



Pl. IIII.



TRAVELS

IN

EUROPE, AFRICA, AND ASIA.

THE GOVERNMENT.

THE empire of Japan is encompaſſed on all ſides with water, and conſiſts of three large iſlands, together with a vaſt multitude of ſmaller ones. All theſe are divided into ſeven departments, which again are ſubdivided into ſixty-eight provinces, and theſe into ſix hundred and four diſtricts.

At preſent, *Kubo*, or the Secular Emperor, is Lord of the whole country, and under him rules a Prince or Governor in each province. The Princes that are firſt in dignity, are called *Daimio*; thoſe of an inferior rank are denominated *Siomio*. If any of them is guilty of miſdemeanors, he is amenable to the Emperor, who has a right to diſmiſs him; to baniſh him to ſome iſland; or even to inflict capital puniſh-

ment upon him. It is farther incumbent upon all theſe Princes to perform a journey once every year to the Imperial Court, to reſide there ſix months, and to keep their whole family there conſtantly, as hoſtages for their allegiance.

But, beſides this Monarch, there is a Spiritual or Eccleſiaſtical Emperor, whoſe power at preſent is totally confined to the concerns of religion and the church eſtabliſhment; although this Spiritual Regent or Pope, derives his deſcent in a direct and uninterrupted line from the ancient Rulers of this country, for upwards of 2000 years back.

If we carry our reſearches back to the remoteſt ages of antiquity, which are enveloped in obſcurity and uncertainty, it will appear probable, that Japan, like other countries, was governed by Patriarchs, or petty Chiefs, who afterwards united together under one head. The moſt authentic Hiſtory of the Japaneſe Monarchs commences about 660 years before the birth of Chriſt, when the government was beſtowed upon SYN MU, of a very conſpicuous race, called TENSIO DAI SIN. This SYN MU is the founder of the monarchy; he introduced an accurate Chronology, called *Nin O*, and improved not only the laws of the country, but likewiſe the very form of the government. The Emperors of this tribe were moſt uſually denominated

minated DAIRI, and ſometimes, but not ſo frequently, *Mikaddo*, *Dai*, *Tai*, *Tenſin*, and *Oo*. One hundred and nineteen DAIRIS have aſcended the throne in ſucceſſion, from that period down to the time of my reſidence at Japan; although their power and authority have been very different and diſſimilar at three different periods. Theſe reigned alone with unlimited authority, till the year 1142. From that time the ſecular power was divided between the oldeſt and lawful Potentate of the country and the ſecular Rulers or Generaliſſimos of the army, till the year 1585, ſince which time his authority has only manifeſted itſelf in matters which concern the government of the church.

The veneration which is entertained for DAIRI, falls little ſhort of the divine honours which are paid to the gods themſelves. He ſeldom goes out of his palace, his perſon being conſidered as too ſacred to be expoſed to the air and the rays of the ſun, and ſtill leſs to the view of any human creature. If at any time he has abſolute occaſion to go abroad, he is generally carried upon men's ſhoulders, that he may not come into contact with the earth. He is brought into the world, lives, and dies within the precincts of his court, the boundaries of which he never once exceeds during his whole life. His hair, nails, and beard are accounted ſo ſacred, that they are

never ſuffered to be cleanſed or cut by day-light, but this, whenever it happens, muſt be done by ſtealth, during the night, whilſt he is aſleep. His holineſs never eats twice off the ſame plate, nor uſes any veſſel for his meals a ſecond time; they being for the moſt part broken to piece, immediately after they have been uſed, to prevent their falling into unhallowed hands. For this reaſon, the furniture of this table conſiſts of a cheap and inferior ſort of porcellain. The caſe is pretty much the ſame with reſpect to his cloaths, which are diſtributed among thoſe who reſide at his court. Without the precincts of the court there is none, or at leaſt hardly any one, that knows his name, till long after his death. His whole court, with very few exceptions, conſiſts of none but ſuch as are of his own race; all of whom have their appointments at court, in like manner as others of them, who are not employed at court, are promoted to the richeſt benefices, and the beſt convents. He has twelve wives, only one of whom, however, is Empreſs. The pomp which reigns in his court, though not ſo ſplendid as formerly, is yet very great. Since the retrenchment of his power, he derives his revenues from the town and adjacent country of *Miaco*; and has likewiſe an allowance from KUBO's treaſury, beſides immenſe ſums which he acquires by the conferring of titles;

and

and yet his revenue is frequently inadequate to his expences. The right of beſtowing titles of honour remains to this day veſted in the perſon of the eccleſiaſtical Emperor, and ſerves conſiderably to increaſe his income. Even KUBO himſelf and the hereditary Prince, receive titles at his hand; as do likewiſe, on KUBO's recommendation, the higheſt officers of ſtate at his court. Thoſe who have ſpiritual titles, are diſtinguiſhed both at court and in the churches all over the country, by a particular dreſs, conformable to their rank and dignity. I had the honour to ſee one of theſe Prelates at a convent in Nagaſaki; his dreſs conſiſted of a pair of trowſers, and a large cloak with a long flowing train. I found him very affable and courteous, and we had a long converſation together, through the medium of our interpreters, reſpecting various matters; which, however, afforded me far leſs pleaſure than the ſhrubs I met with in the vicinity of his church.

DAIRI's court was formerly removed at pleaſure from one part of the country to the other; but now his reſidence is fixed in the town of *Miaco*. This court is very extenſive, and forms of itſelf no inconſiderable town, being provided with walls, foſſes, ramparts, and gates: in the centre ſtands DAIRI's palace, adorned with lofty turrets, and round about it are the manſions of

both the ſuperior and inferior officers of his houſehold, and other attendants. A Governor is kept here for his ſervice by KUBO, and a guard appointed for his ſafety, to defend the ſacred perſon of DAIRI, and by way of ſecurity to KUBO, that no diſturbances or inſurrection can be raiſed there. At this court literature is cultivated, and academic ſtudies are purſued with vigour. It is the only univerſity in the country; and here the ſtudents are maintained, brought up, and inſtructed. The principal objects of their application are poetry, the hiſtory of the country, mathematics, &c. Muſic is a very favourite ſtudy with them, eſpecially with the ladies. Here it is that all their almanacks are compiled, which are afterwards printed in *Iſſe*.

Although DAIRI has loſt his authority in temporal concerns, yet he is ſtill conſidered as ſo auguſt and holy, that KUBO, either in perſon or by his ambaſſador, is bound to pay him a viſit, and that either annually, or at the expiration of a certain ſtated time; bringing with him, according to the general cuſtom of the country, preſents of great value. YORITOMO and many more of the ſecular Emperors, have viſited *Miaco* in perſon, to perform this homage, which latterly however, and by degrees, has been more and more neglected, and is at laſt entirely given up. Neither the Princes of the country, nor the Dutch, when they

they go up to *Jedo*, pay their reſpects to the eccleſiaſtical Emperor in *Miaco*. Seventy-ſix Emperors of this race have reigned with unlimited power, till the year 1142, when civil commotions aroſe among the Princes of the land, and a calamitous war was waged between them. With a view to compoſe theſe diſturbances, the command of the armies was given to YORITOMO, in the quality of Generaliſſimo. This valiant commander ſuppreſſed, indeed, the growing diſturbances, but at the ſame time alſo arrogated to himſelf and his ſucceſſors great part of the Emperor's authority; which continued to be divided between DAIRI and the Imperial Generals till the year 1585. About this time a peaſant's ſon, named TAIKO *Samma*, had raiſed himſelf by his ſuperior abilities to the rank of General, reduced all the Princes of the Land under his authority, and in the end deprived DAIRI of all the power he had hitherto poſſeſſed, with reſpect to ſecular affairs, and the government of the empire. From the reign of YORITOMO, the firſt of the ſecular Monarchs, to that of YE VARU, who ſwayed the ſceptre of Japan, at the time of my reſidence in that country, one and forty KUBOS had ſat upon the throne, and kept their court at *Jedo*. The ſecular Emperor does not, however, hold the reins of government entirely in his own hands, but reigns conjointly with ſix Privy Counſellors,

who are moſtly men in years and of ſound judgment. Beſides the conſiderable preſents which each ruling Prince ſends to court of the produce of his province, KUBO derives his revenue from certain crown lands, as they are called, or five imperial provinces, and ſome imperial towns, which are ſubject to the ſway of Governors or *Bugios*. The tax or tribute is paid in ſuch commodities as each country produces. In the ſame manner each of the Princes receives tribute from his province, with which he maintains his houſehold, his troops, defrays the expences of keeping the roads in repair, as likewiſe of his journies to court, maintains his family, &c.

The five imperial crown-lands pay a tax of 148 *mans* and 1200 *kokfs* of rice, which amounts to nearly 44,400,000,000 ſacks of rice. Each *man* contains 100,000 *kokfs*, each *kokf* 3000 *balis* or ſacks of rice, and each ſack weighs upwards of twenty pounds. The aggregate revenue of the whole empire of Japan amounts at leaſt to 2328 *mans* and 6200 *kokfs*.

At the time when KÆMPFER reſided in Japan, in the year 1692, the *Dairi* KINSEOKWO TEI, was in the fifth year of his reign, having aſcended the throne A. C. 1687. Since that period the following Emperors have reigned.

NAKA *no Mikaddo no Yu*, from 1709 to 1735.

SAKKURA *Matie no Yu*, from 1736 to 1746.

MOMO

MOMO *Zon no Yn*, from 1747 to 1761.

ZENTOOGOZIO, from 1762 to 1769.

And, ſince the year 1770, FIGASI *jamma no Yn*, who continued to fill the imperial throne at the time of my departure from Japan, in the year 1776.

Of KUBOS, or ſecular Emperors, the following have ſucceſſively ſat on the throne of Japan. In the year 1693, when KÆMPFER took his leave of this country, KUBO CHINAYOS ſtill reigned. He was then in the 43d year of his age, and had reigned twelve or thirteen years. The whole duration of his reign comprehended a period of twenty-nine years. After him followed:

YE NOB *Koo*, and reigned from 1709 to 1712.

YE TSU KU *Koo*, from 1713 to 1716.

YOSI MUNE *Koo*, from 1717 to 1751.

YE SIEGE *Koo*, from 1752 to 1761; at which time the preſent KUBO.

YE FAR *Koo*, aſcended the throne, which he ſtill occupied at the time of my departure A. 1776.

The government of each province is intruſted to ſome Prince, who reſides in it, and is reſponſible to the ſecular Emperor for his adminiſtration. He has a right to all the revenues of his fief, with which he ſupports his court, his military force, keeps the roads in repair, &c. He is likewiſe bound, as we ſaid before, to make a journey once every year to KUBO's court, with a degree

a degree of pomp ſuited to the ſize and dignity of his fief, to take with him conſiderable preſents, and to keep his family conſtantly at this Emperor's court, as hoſtages for his allegiance.

The towns, in which theſe Princes hold their court, are moſtly of conſiderable note, ſituated near ſome harbour, or large river, and ſurrounded with walls and foſſes. Moſt frequently at one of the extremities of the town ſtands the Prince's caſtle, which is of a great extent, being likewiſe ſurrounded with a wall and foſſe, provided with ſtrong gates, and adorned with high towers. Theſe caſtles are for the moſt part, like the imperial palace at Jedo, divided into three compartments, each of which is well fortified. The innermoſt is the reſidence of the Prince himſelf; the ſecond is allotted to the ſuperior officers of ſtate; the third and laſt is deſtined for his troops, with the reſt of his retinue and attendants. Not only are the towns themſelves provided with gates, but each individual ſtreet has its own gates, which are ſhut during night, and on ſome other occaſions, ſo that not a ſoul can either enter in or go out. The diſtance between each of theſe gates is generally from 60 to 120 yards. Each ſtreet has its own watch, watch-houſe, and apparatus for guarding againſt fire; as likewiſe an *Ottona*, and other officers, for preſerving decorum and good order. For the accommodation

of

of travellers in every town there are a great many inns, which are neat and conveniently ſituated; by the ſide of the roads likewiſe, and near each other, (none of them being more than a quarter of an hour's diſtance aſunder) there are others, which are poſt-houſes, where are always to be found horſes, and norimon-bearers, who forward travellers for a certain determined price, proportioned to the length and difficulty of the road: ſo that the price of travelling is not the ſame throughout the whole country, but is regulated according to the nature of the roads in each place. Although the regulations here, as well in the towns as in the country, agreeable to the genius of this people, appear ſometimes very ſingular, and frequently even ſavour of compulſion and conſtraint, ſtill it cannot be denied, that they are really ſometimes both neceſſary and excellent. Upon the whole, both the ſupreme government, and the civil magiſtrates, make the welfare of the ſtate, the preſervation of order, and the protection of the perſons and property of the ſubject, an object of greater moment and attention in this country than in moſt others.

The villages in Japan are for the moſt part ſituated near the public roads; they are diſtinguiſhed from the towns by having only one ſtreet, and by being open; but they are otherwiſe of an extraordinary length, extending from a mile

a mile and a half to three miles, and ſometimes farther.

The roads are both broad and kept in excellent repair, as they are not liable to be ſpoiled by wheel-carriages, in a country where travellers are generally carried by men in a kind of litter, or elſe walk. With reſpect to this, they conſtantly obſerve a moſt excellent rule, which is, that travellers ſhall always keep on the left-hand ſide of the way, ſo that different companies, whether great or ſmall, may meet and paſs, without in any wiſe incommoding each other: a regulation, which, in other countries that lie under leſs reſtraint, deſerves ſo much the more to be attended to, as not only in the high roads in the country, but even in towns and cities, every year exhibits in no inconſiderable number, the moſt lamentable, and, to an enlightened nation, diſgraceful inſtances of perſons of every age and ſex, but more eſpecially children and old people, being rode or driven over by the giddy ſons of riot and diſſipation; of which broken limbs, if not loſs of life itſelf, is a pretty certain conſequence. And as it often happens that bridges cannot be laid down over certain parts of a river, on account of the violent floods, the beſt and ſafeſt regulations are adopted for tranſporting travellers over, either in boats or upon the hands of men. Even in the moſt inconſiderable villages there is a number

number of petty inns eſtabliſhed, where the traveller is ſure to find boiling water ready for his tea, with other refreſhments.

WEAPONS.

THE arms of the Japaneſe conſiſt of bows and arrows, ſcymitars, halberts, and guns. Their *Bows* are very large, and their arrows long, like thoſe of the Chineſe. When theſe bows are to be drawn and the arrows diſcharged, the troops always place themſelves upon one knee; a poſition which renders it impoſſible for them to diſcharge their arrows in quick ſucceſſion. In the ſpring the troops aſſemble to exerciſe themſelves with theſe bows in ſhooting at a mark. *Guns* are not their uſual weapons: I could only meet with theſe at the houſes of the gentry, where they were diſplayed upon an elevated ſtand, appropriated for that purpoſe in the audience-chamber. The barrels of the guns were of the uſual length, but the ſtock behind the lock was very ſhort, and in as much as I could perceive at a diſtance, there was a match in the lock; the locks are ſometimes made of copper. I never had an opportunity of ſeeing a gun fired off, although I have ſeveral

times

times heard them diſcharged from the Dutch factory in the neighbourhood of the town of Nagaſaki; but the interpreters informed me, that their guns, which, on account of their ſhortneſs, could not be placed againſt the ſhoulder, were here generally held againſt the cheek-bone; a poſition, which, however, appears not a little ſingular. *Cannons* are not the uſual arms of this country; although at Nagaſaki, in the poſſeſſion of the imperial guard, there are ſome to be ſeen, which were formerly taken from the Portugueſe; but they are never uſed for ſaluting the ſhips; and indeed they are very ſeldom diſcharged at all. The Japaneſe have little or no notion of the proper mode of uſing them; and whenever they are to fire them off, which is generally done once every ſeven years, at Nagaſaki, in order to cleanſe and prove them, the adjutant of artillery provides himſelf with a long pole, to which he fixes the match, and notwithſtanding this precaution, ſometimes ſets fire to the cannon with averted eyes. The *Scymitar*, therefore, is their chief and choiceſt weapon, and is conſtantly worn by every one but the peaſants. This ſcymitar is a yard in length, ſomewhat inclining to a curve, and has a broad back; the blades are of an incomparably good temper, and ſuch as are old, in particular, are very highly valued. In goodneſs they far ſurpaſs the Spaniſh blades, which

are

are ſo much renowned throughout Europe: they will cut a very large nail aſunder with eaſe, and without their edge being turned; and, according to the accounts of the Japaneſe, will cleave a man aſunder from top to bottom. A blade is never ſold for leſs than ſix kobangs; but theſe ſcymitars often fetch from fifty to ſeventy, and even a hundred rix-dollars, and are conſidered by the Japaneſe as the moſt precious and valuable part of their property. The hilt is furniſhed with a round and ſubſtantial guard, without any bow, and is ſometimes full ſix inches long; the hilt itſelf is ſomewhat roundiſh and flat, is frequently ſplit at the ends, and covered with ſhark's-ſkin, which preſents a ſurface replete with knobs of different ſizes. Theſe ſkins have been imported by the Dutch and bought of them at a very dear rate; ſometimes from fifty to eighty kobangs, each kobang being valued at ſix rix-dollars. Round this ſhagreen ſilken cords are twiſted checkerwiſe, ſo that the ſhagreen appears through; the guard itſelf is thicker than a rix-dollar, embelliſhed with emboſſed figures, or curious openwork. The ſcabbard of the ſcymitar is thick and rather flat, and cut off ſquare at the end; it is ſometimes covered over with the fineſt ſhagreen, which is lackered; ſometimes it is made of wood, and lackered either entirely black, or variegated with black and white ſpots, like marble.

marble. Sometimes one ſees a ſilver ring or two encompaſſing the ſcabbard; in the fore part on one ſide there is a ſmall riſing prominence with a hole in it, through which a ſtrong ſilken cord is introduced, that ſerves occaſionally to faſten the ſcymitar. Near the inner ſide of the hilt, there is another hole, which contains a knife about ſix inches in length. This ſilken cord is ſometimes yellow, and ſomtimes green, but more commonly black. They never make uſe of an appropriated belt, but always thruſt the ſcymitar into the belt upon the left ſide, with the edge upwards, which to Europeans appears ridiculous enough.

In the figures which Dr. KÆMPFER has given of the Japaneſe, in his Hiſtory of Japan, theſe ſcymitars are drawn after the European manner, and therefore appear in the very reverſe of their real poſition. Every magiſtrate, as well as the ſuperior and inferior officers of the army, wear conſtantly two of theſe ſcymitars, one of which is their own private property, the other is what is called their official ſcymitar, and is farther diſtinguiſhed by its ſuperior length. Both theſe ſcymitars are worn in the belt upon the ſame ſide, where they lie a little acroſs each other. On entering a room, and ſitting down, they generally take off their official ſcymitar, and lay it either on one ſide of them, or before them. The interpreters had only one ſcymitar, but the banjoſes

fore two; and theſe were always the firſt that came on board, and the laſt that left the ſhip, on thoſe days when any buſineſs was to be tranſacted there.

RELIGION.

PAGANISM is the eſtabliſhed religion throughout the whole empire of Japan; but their ſects are both numerous, and very oppoſite to each other in their tenets; notwithſtanding which they all live together in the greateſt harmony and concord, without diſputes or quarrels. The eccleſiaſtical Emperor, DAIRI, is, like the Pope, the head of the church, and appoints the principal prieſts. Every ſect has its reſpective church, and its own peculiar idols, which are repreſented under ſome determinate, and that, for the moſt part, very uncouth and hideous form. The number of theſe fictitious deities is ſuch, that almoſt every trade has its own tutelar divinity, after the manner of the ancient Greeks and Romans; and conſequently they have both their *Dii majorum et minorum gentium*. The Japaneſe are not, indeed, entirely ignorant of the exiſtence of an eternal,

omnipotent Being, ſupreme in power and might above all other gods; but their knowledge in this particular is very much obſcured with fable and ſuperſtition. Notwithſtanding this, I have never ſeen among any Pagans whatever ſo large and majeſtic a repreſentation of this god, as is to be met with in two of the temples in this country. In the one is ſeen a wooden image, of ſuch an amazing magnitude, that ſix men can ſit croſs-legged, in the Japaneſe faſhion, upon its wriſt, and it meaſures ten yards in breadth acroſs the ſhoulders. In the other, his infinite power is repreſented by a multitude of ſubaltern deities, who ſtand round him on each ſide, to the number of 33,333.

Their temples, of which they have likewiſe a great variety, are generally built in the ſuburbs of the towns, upon the higheſt and moſt eligible ſpots. The prieſts in each temple are numerous, although they have little or no employment, any farther than to keep the temple clean, to light the fires and the lamps, and to preſent ſuch flowers as are conſecrated to the idol, and which they believe to be moſt agreeable to him. No ſermons are preached, nor hymns ſung in the temples; but they are left open all day for the accommodation of ſuch as wiſh to offer up their prayers, or to leave their offerings. Nor are ſtrangers denied admittance to their temples; not

not even the Dutch, who are allowed to viſit them, and may be accommodated with lodgings in them, whenever it happens that the inns in the petty country towns are beſpoke; as was once the caſe in the courſe of the journey that I made to the imperial court.

The principal religions of Japan may properly be ſaid to be only two: the *Sinto* and the *Budſdo*. The former is the proper and moſt ancient religion of the country; though its adherents are not ſo numerous as thoſe of the latter, which was brought hither from the continent of Aſia, and has acquired the greateſt number of followers. The doctrine of the *Sinto*, in its original ſimplicity and purity, was much nobler than it was after it became in proceſs of time adulterated with a great many foreign and ſuperfluous ceremonies. It is even probable that it originated from the Babylonian emigrants, and was in its riſe more intelligible and clear, but by degrees became obſcured. Its adherents acknowledge and believe in a Supreme Being, who inhabits the higheſt heavens; but they likewiſe allow of inferior or ſubaltern deities. It is by this Supreme Divinity that they ſwear; and they believe him to be far too great to ſtand in need of their worſhip. Their adoration, therefore, has for its object the inferior deities, who, according to their creed, exerciſe dominion over the earth,

the water, the air, &c. and have it in their power to make men happy or miſerable. Neither are they without ſome conception, however imperfect, of the immortality of the ſoul, and of a future ſtate of happineſs or miſery after death. According to their tradition, the ſouls of the virtuous have a place aſſigned them immediately under heaven, whilſt thoſe of the wicked are doomed to wander to and fro under the cope and canopy of heaven, in order to expiate their ſins; conſequently they place no manner of faith in the metempſychoſis or tranſmigration of ſouls into animals or other bodies; the whole tenor of their doctrine has no other object than to render mankind virtuous in this life: their chief and univerſal care is to preſerve a clear conſcience, to lead a virtuous life, and to ſhew due obedience to the laws of their ſovereign. They abſtain from animal food, are very loth to ſhed blood, and will not touch any dead body. Whenever any one tranſgreſſes in any of theſe points, he is conſidered as unclean for a longer or a ſhorter term, as was the caſe with the Jews, agreeable to the Levitical law. They believe that there are no other devils than thoſe which reſide, as ſouls, in foxes; theſe animals being conſidered as very noxious and dangerous in this country.

Although

Although the profeſſors of this religion are perſuaded that their gods know all things, and that, therefore, it is unneceſſary to pray to them for any thing, they have, nevertheleſs, both churches and certain ſtated holidays. Their gods are called *Sin* or *Kami*, and their churches are ſtyled *Mia*. Theſe churches conſiſt of ſeveral different apartments and galleries, with windows and doors in front, which can be taken away and replaced at pleaſure, according to the cuſtom of the country. The floors are covered with ſtraw-mats, and the roofs project ſo wide on every ſide, as to overhang an elevated path in which people walk round the temple. In theſe churches one meets with no viſible idol, nor any image which is deſigned to repreſent the Supreme inviſible Being; though they ſometimes keep a little image in a box, repreſenting ſome inferior divinity, to whom the temple is conſecrated. In the centre of the temple is frequently placed a large mirror, made of caſt-metal well poliſhed, which is deſigned to remind thoſe that come to worſhip, that, in like manner as their perſonal blemiſhes are faithfully pourtrayed in the mirror, ſo do the ſecret blemiſhes and evil qualities of their hearts lie open and expoſed to the all-ſearching eyes of the immortal gods.

I have frequently obſerved with the greateſt aſtoniſhment, as well on holidays as on other

occaſions, the extreme devotion with which the Sintoiſts approach theſe temples; they never venture to approach the houſe of their god, if they are in any wiſe impure; for which reaſon they waſh themſelves firſt perfectly clean, dreſs themſelves in their very beſt apparel, and waſh their hands a ſecond time juſt at the entrance of the temple; then advancing with the greateſt reverence, they place themſelves before the mirror, and after bowing reſpectfully down to the very ground, turn once more to the mirror, prefer their prayers, and preſent their offerings. At the concluſion, they ring thrice a little bell which is kept for that purpoſe in the temple, and retire to ſpend the remainder of the day in mirth and rejoicing.

The prieſts in theſe temples may be divided into two claſſes; the firſt, who attend to the domeſtic buſineſs of the temple, are ſecular prieſts, and illiterate, in order that they may not be able to reveal the myſteries of their religion. The other claſs, conſiſting of thoſe who are in ſacred orders, inſtruct their diſciples in the religious myſteries of their ſect, who are bound by oath not to reveal any part of them. The ſecular prieſts ſhave their beards, but not their heads; and are habited in a large and looſe dreſs, after the manner of the country; on their heads they wear a lackered hat, with a ſilken taſſel hanging down

down behind. Since the introduction of *Budſdo*'s doctrine into this country, this ſect has adopted a greater variety both of tenets and ceremonies than it originally embraced, and unqueſtionably merits the preference before all other ſects in the iſland, notwithſtanding all the ſuperſtition with which it is infected. KUBO profeſſes himſelf of this ſect, and is bound to make a viſit every year, either in perſon or by his ambaſſador, to one of their temples, and there to perform his devotion, and at the ſame time to leave behind him preſents of great value.

Budſdo's doctrine was originally brought hither from the weſtern coaſt of the Eaſt-Indies; that is to ſay, from Mallabar, Coromandel, and Ceylon. *Budha*, who without doubt is the ſame with *Budſdo*, was a prophet among the Bramins, who is reported to have been born in Ceylon about one thouſand years before the birth of Chriſt, and was the founder of that ſect which has ſince diffuſed itſelf over every part of the Eaſt-Indies, and to the remoteſt boundaries of Aſia. The doctrine, however, did not gain repute in China till a long time after its firſt introduction; from thence it paſſed over into Coræa, and from that place into Japan, where it was very generally received, and, being blended with that of the ancient *Sinto*, gave birth to the moſt monſtrous and abſurd ſuperſtitions. Its principal tenets con-

ſiſt in the following maxims: that the ſouls of men and beaſts are alike immortal: that a juſt diſtribution of rewards and puniſhments takes place after death; that there are different degrees of happineſs as well as of puniſhment; that the ſouls of the wicked tranſmigrate after death into the bodies of animals, and at laſt, in caſe of amendment, are tranſlated back again into the human form, &c. &c. To the Supreme God they give the name of *Amida*; and Satan is called *Jemma*.

The churches of all the different religious ſects are in general built upon the moſt eligible ſpots, both in the villages and in the towns; the roads leading to them likewiſe are frequently adorned with alleys of cypreſs trees, and handſome gates; moſt of them have a ſeparate apartment for the idol, who is ſometimes exhibited ſitting upon an altar, ſurrounded with incenſe, flowers, and other decorations.

The churches throughout the whole country are open every day in the year; but they are, as the reader will eaſily imagine, more generally frequented on the cuſtomary feſtival days, and likewiſe at other times, by a multitude of viſiters, who repair thither in order to amuſe and divert themſelves.

The uſual holidays in Japan are the firſt day in every month, when they riſe early in the morning,

morning, dreſs themſelves handſomely, and go to pay their reſpects to their friends and ſuperiors, at the ſame time wiſhing them joy of the new month. This day is kept as a feſtival throughout the whole empire; a cuſtom which has been obſerved from the earlieſt ages. The full of the moon, or the fifteenth day, is another holiday, on which the people reſort to the temples in greater numbers than on the firſt. The third feſtival is of leſs conſequence, and falls upon the twenty-eight day, or the day before the new month.

Beſides theſe monthly feſtivals, they celebrate five more, which happen but once in the year: the firſt of theſe is New year's day. On this day they riſe very early in the morning, dreſs themſelves in their beſt attire, and go round among their ſuperiors, friends, and relations, to wiſh them a happy new year; the remainder of the day is ſpent in eating and drinking, viſiting the temples, and making merry; ſome of them make a practice of giving away ſome trifling preſent on theſe occaſions; and very often the eldeſt of the tribe gives a public ſupper to his kindred. The whole country, at this time, is in a ſtate of buſy fermentation, as it were, which laſts for three whole days; after this the whole of the firſt month is dedicated almoſt to no other purpoſe than paſtime and pleaſure. The *ſecond*

annual

annual feſtival falls upon the third day of the third month; the *third* upon the fifth day of the fifth month; the *fourth* upon the ſeventh day of the ſeventh month; and the *fifth* upon the ninth day of the ninth month. Theſe months and days, which make always uneven numbers, are conſidered by the Japaneſe as unlucky, and are therefore dedicated (ſetting all buſineſs aſide) to mirth and mutual congratulations, and in ſome meaſure, though but little, to the ſervice of the divinities. On ſome of theſe holidays, in preference to other days, they celebrate their nuptials, give public entertainments and other diverſions; as it is a maxim with them, that the gods take delight in ſeeing mankind joyful and happy.

Some of the churches in the country being more worthy of note than others, it is common to perform pilgrimages thither from all parts of the empire, in like manner as the Mahometans are accuſtomed to viſit Mecca. Among theſe the temple of *Iſie*, which is conſecrated to TENSIO DAI SIN, the moſt ancient of their gods, and ſupreme above all the other celeſtial divinities, is particularly remarkable. This temple is the moſt ancient in the whole empire, and at the ſame time in the worſt condition, being now ſo exceedingly decayed with age, that it can ſcarcely be kept together with the greateſt care and attention. It has no other ornaments than a mirror,

and

and ſlips of white paper hung round about on the walls, denoting that nothing impure may approach, or can be pleaſing to God; as likewiſe that nothing can be hid from his all-ſeeing eye. The Emperor, who cannot perſonally viſit this temple, ſends hither every year an ambaſſador in his ſtead, in the firſt month of the year. Every one of his ſubjects, without any exception of age or ſex, is bound to undertake a pilgrimage hither at leaſt once in his life-time, and many perform it every year: people of ſuperior rank, however, go but ſeldom; as here, as well as in other places, they arrogate to themſelves various privileges and prerogatives, in which they conſult their private eaſe and convenience, rather than their duty. Theſe journeys may be undertaken at any ſeaſon of the year, as beſt ſuits the convenience of the party, but in general they chuſe the pleaſanteſt months, eſpecially the ſpring. The performance of ſuch a pilgrimage is deemed highly meritorious, and is beſides rewarded with an indulgence, granting remiſſion of ſins for the whole year. In the courſe of my journey to the imperial court at Jedo, I ſaw ſome thouſands of theſe devout pilgrims, many of whom were ſo wretched and indigent, that they were obliged to beg their way. Theſe miſerable people even carried their beds with them, agreeable to the faſhion of the country, conſiſting of a ſtraw

matt, which they carried on their backs; moſt of them were farther provided with a little bucket, which ſerved them to drink out of, as likewiſe to receive the alms given them. On this bucket I ſaw the name of the owner inſcribed, which ſerved to ſhew who the traveller was, in caſe he ſhould meet with any calamity, or chance to die on the road. On their arrival at *Iſie*, the pilgrims are conducted by ſome prieſt to the temple of the god, where they humbly prefer their prayers, and, in conſideration of ſome preſent made to the prieſt, are favoured with an indulgence; which conſiſts of a few thin laminæ of pewter, kept in an oblong box, made likewiſe of thin pewter.

Beſides the prieſts employed in the ſervice of the different churches, there is another claſs, or a leſs ſacred *Order* of them. The *order of Blind Monks* is, perhaps, one of the moſt ſingular that ever was known, and is not to be paralleled in the whole world, conſiſting of none but blind members, who are diſperſed over the whole empire. The order of *Jammabos*, or Monks of the Mountain, is likewiſe worthy of notice; it was founded about 1200 years ago, and has a General, who reſides in Miaco, and diſtributes titles of honour to his dependants, according to their various merits. Theſe wear, by way of diſtinction, a ſmall cord ſuſpended from the neck,

neck, to which are attached ſeveral pieces of fringe, of different lengths, according to the merit of the wearer: they farther wear a ſcymitar on the left ſide, and carry in their hands a ſtaff with a copper head to it, and a conch, or *Murex tritonis*, which ſerves them inſtead of a trumpet. Their head is covered with a cap, on their back is hung a ſack, and a pair of ſhoes, to make uſe of when they travel over the mountains, and they are likewiſe frequently provided with a roſary, or kind of *pater noſter*. The monks of this order, ſuffer many hardſhips, and are in duty bound, once every year, to the great and imminent danger of their lives, to traverſe wild foreſts, and to climb up to the ſummits of the higheſt mountains. It is furthermore incumbent upon them to ſtudy cleanlineſs; on which account they bathe very often in cold water, and ſubſiſt ſolely upon roots and herbs which they gather in the mountains; in fine, they wander barefoot over the whole country, and, like the gypſies in the north, cure diſorders, reſtore ſtolen goods, tell fortunes, &c.

Vows are frequently made by ſuperſtitious perſons; thus, for inſtance, one of our beſt interpreters, a man advanced in years, having made a vow, a long time back, never to make uſe of ſhoes, and being this year employed to accom-

pany

pany the Dutch embaſſy to the imperial court in the depth of winter, marched along very patiently upon his bare feet; bore all the inclemency of the weather with the unconcern of a Stoic, and, what was ſurpriſing, did not afterwards ſuffer any inconvenience in conſequence of his hard and troubleſome expedition.

Nunneries have been eſtabliſhed in this country upwards of a thouſand years ago, although, with reſpect to number, they fall infinitely ſhort of thoſe eſtabliſhed in Europe.

Every *Order* or ſect has conſtantly its General reſident in *Miaco*; beſides which every church or convent has its own ſuperior: excluſively of theſe, they have likewiſe at the ſecular Emperor's court in *Jedo*, their eccleſiaſtical plenipotentiary; whoſe buſineſs it is to ſettle ſuch diſputes as concern temporal matters in the country, as likewiſe to take cognizance of the miſconduct of thoſe who are in holy orders: but when ſentence of death is to be paſſed upon the latter, the warrant muſt always be previouſly ſigned by the General of the order.

The *Chriſtian* religion was brought into Japan immediately after the diſcovery of this country by the Portugueſe. The firſt Jeſuit Miſſionaries arrived in the province of *Bungo* in the year 1549, and in a ſhort time ſpread themſelves over the

the whole country, where they continued till the year 1638, when 37,000 Chriſtians were maſſacred. In 1549, a Japaneſe youth was baptiſed in *Goa*, who gave the Portugueſe great inſight into the advantages which they might reap in Japan, both with reſpect to commerce and the propagation of the Chriſtian religion. The Portugueſe enjoyed here the moſt unlimited freedom, with liberty to travel over the whole country, to trade and to preach. Their commerce proved very lucrative, and the work of converſion made ſuch a rapid progreſs, that many of the Princes of the empire, as for inſtance, the Princes of *Bungo*, *Arrina*, *Emura*, and many more, embraced the Chriſtian religion, which induced the Portugueſe to come over in great numbers, marry, and ſettle in different parts of the country. In 1582, after forty years labour, the Catholic religion was in ſuch high eſteem here, that a Japaneſe embaſſy was ſent to Rome to Pope GREGORY XIII. with letters and valuable preſents. But the incredible profits of this commerce, added to the rapid progreſs of the Chriſtian religion, ſoon puffed up the Portugueſe with pride, and it was not long before their avarice and haughtineſs proved their ruin. In proportion as their riches and credit increaſed, they became inſupportable to the Japaneſe, and were at length deteſted to ſuch a degree, that already in the

year

year 1586 a decree was iſſued for the extermination of the Chriſtians; in conſequence of which, heavy perſecutions were commenced againſt them, and in the year 1590 only, upwards of twenty thouſand of them were put to death. Notwithſtanding all this, numbers of the Japaneſe daily became proſelytes to the Chriſtian faith; ſo that in the years 1591 and 1592 not leſs than twelve thouſand were converted and baptized. Even the Emperor KUBO FIDE JORI himſelf profeſſed Chriſtianity, together with his court and army, and had the Portugueſe but conducted themſelves with prudence and gentleneſs, there is every reaſon to believe, that the perſecutions already commenced againſt them would have ceaſed. But inſtead of this, they gave daily greater ſcope to their haughtineſs and ambition, and one of their biſhops behaving with unwarrantable rudeneſs towards a Prince of the Empire, thereby accelerated their final ruin; giving, at the ſame time, a deciſive blow to their lucrative commerce, together with the propagation of the Chriſtian religion. This circumſtance took place in the year 1596, when a certain Prince was ſo groſsly affronted by an ambitious Prelate, during a journey to the imperial court, that on his arrival at *Jedo*, the former laid before KUBO a ſtatement of the whole affair. Hence aroſe a new perſecution againſt the Chriſtians in the year following; the Prieſts being

being forbidden to preach, a great many of the Clergy baniſhed out of the country, and the mercantile part of the colony ſent to the iſland of *Deſima*. At this time too a conſpiracy was diſcovered, which the Portugueſe had ſet on foot againſt the Emperor, with an intent to dethrone him. The Dutch, who happened at that time to be at war with the Portugueſe, having captured one of their veſſels, found, among other papers, a letter from a certain Japaneſe Captain, named MORO, to the King of Portugal, containing the particulars of the plot concerted againſt the Emperor's throne and perſon. The actual exiſtence of this conſpiracy being afterwards fully authenticated by another letter written by MORO to *Macao*, the Japaneſe government came to the final determination to baniſh all Chriſtians from the empire, who ſhould refuſe to abjure the Catholic faith, or elſe to put them all to death without quarter. This perſecution was accordingly commenced, and carried on without intermiſſion, for the ſpace of forty years, when it ended in the total eradication of the Chriſtian religion, together with the final overthrow of the trade carried on by the Portugueſe; after 37,000 Chriſtians, who had taken refuge in the caſtle of *Simabara*, where they ſuſtained a ſiege, had been forced to ſurrender, and were all put to the ſword in one day. The Japaneſe, who were perſuaded

that this unwarrantable conduct in the Chriſtians was the inſeparable conſequence of their doctrines, took from that time forward the moſt efficacious meaſures to prevent the Chriſtian faith from being ever re-eſtabliſhed in their dominions; and the Portugueſe received ſtrict injunctions, under the ſevereſt penalties, never to approach their coaſts any more. And in order the more effectually to diſcover whether any Japaneſe Chriſtians remained hidden and concealed in the country, recourſe was had to various inſtitutions, and, among others, to that of trampling upon the images of the ſaints, a cuſtom which ſtill prevails, and is repeated at the commencement of every year in Nagaſaki, and the circumjacent country.

Philoſophers and moraliſts are regarded in this country in the ſame light as prieſts and ſacred perſons, and their tenets have been embraced with equal ardour with thoſe of other ſpiritual ſects. The chief, which has obtained eſtimation and repute in Japan, is *Sjuto* or *Kooſi*, known in Europe by the name of the Morality of Confucius. This ſyſtem derives its origin from China, where Confucius was born 400 years after Budsdo. Its followers, though they cannot properly be ſaid to worſhip any God, place their *ſummum bonum*, nevertheleſs, in a virtuous life; and admit of rewards or puniſhments for man in this life only. They confeſs that a univerſal ſoul

or

or ſpirit belongs to the world, without acknowledging any other gods, without having churches, and without worſhipping any one. Their doctrine, therefore, chiefly inculcates the following maxims; to lead a virtuous life, to do juſtice to every man, to behave at the ſame time to all perſons with civility, to govern with equity, and to maintain an inviolate integrity of heart. They do not burn their dead, but lay them, like the Europeans, in a cheſt, and bury them in the earth. Suicide is not only deemed lawful among them, but is even applauded, and conſidered as an heroic act.

The difference between this ſyſtem of morality, which has been introduced among them in latter times, and their moſt ancient religion, is very great and remarkable. In their modern ſyſtem we diſcover the offspring of human wit; whilſt their ancient religion exhibits evident traces of the divine Law of Moſes.

FOOD, AND THE VARIOUS MODES OF PREPARING IT.

IN the multiplicity of the articles of food to be met with in its iſlands, and the ſurrounding ocean, and which both nature and art conſpire

to furniſh and prepare, Japan may, perhaps, be ſaid to ſurpaſs moſt other countries hitherto known to us. The Japaneſe not only make uſe of ſuch things for food and aliment, which are in themſelves wholeſome and nutritive, but take in almoſt the whole of the animal and vegetable kingdoms, not excepting the moſt poiſonous; which, by their mode of dreſſing and preparing them, may be rendered harmleſs and even uſeful. The meat that is ſerved up in every diſh, is cut into ſmall pieces, thoroughly boiled and ſtewed, and mixed with agreeable ſauces. By this means all the viands are extremely well dreſſed; and the maſter of the houſe is not harraſſed at his table with the trouble of cutting up great pieces, or of diſtributing the proviſions round to the gueſts. At meal-time every one ſeats himſelf upon the ſoft floor-mats; facing each gueſt is placed a ſmall ſquare table, that ſerves for the purpoſe of holding the different diſhes, which already in the kitchen have been portioned out to each perſon, and are ſerved up in the neateſt veſſels, either of porcelain or japanned wood. Theſe cups are tolerably large baſons, and always furniſhed with a lid. The firſt courſe conſiſts generally of fiſh, with fiſh-ſoup; the ſoup they drink out of the cup, but eat the ſolid part, which is chopped into ſmall pieces, with two lackered pegs, which they hold ſo dexterouſly

bet ween

between the fingers of the right hand, that they can with the greateſt nicety take up the ſmalleſt grain of rice with them; and theſe pegs ſerve them for the purpoſe both of fork and ſpoon. As ſoon as one courſe is finiſhed it is taken away, and another ſerved up in its room. The laſt courſe is brought to table in a cup of blue porcelain, and this likewiſe is furniſhed with a lid. The victuals are carried in by a ſervant, who kneels down as he places them upon the table, and takes them away after dinner. When ſeveral perſons eat in company together, they all ſalute each other with a low bow, before they begin to eat The ladies do not eat with the men, but by themſelves. Between each diſh, they drink warm ſacki, or rice-beer, which is poured out of a tea-kettle into ſhallow tea-ſaucers, made of lackered wood; and during this, they ſometimes eat a quarter of an egg, boiled hard, and very frequently they drink at the ſame time to ſomebody's health. In general they eat three times a day; about eight o'clock in the morning, two o'clock at noon, and eight in the evening. There are ſome that obſerve no regular time for their meals; but eat whenever they are hungry; for which reaſon the victuals are obliged to be kept in readineſs the whole day. Rice, which is here exceedingly white and well-taſted, ſupplies, with the Japaneſe, the place of bread:

they eat it boiled with every kind of proviſions. *Miſo* ſoup, boiled with fiſh and onions, is eaten by the common people frequently three times a day, or at each of their cuſtomary meals. *Miſos* are not unlike lentils, and are ſmall beans, gathered from the *Dolichos ſoja*. Fiſh is likewiſe a very common diſh with the Japaneſe, both boiled and fried in oil. Fowls, of which they have a great variety, both wild and tame, are eaten in great abundance; and the fleſh of whales, though coarſe, is in ſeveral places, at leaſt among the poorer ſort, a very common food. It has a red and diſagreeable look, and was often expoſed for ſale in the ſtreets in Nagaſaki, when I paſſed by, in order to go on board of ſhip.

In preparing their victuals, they make uſe of expreſſed oils, of ſeveral different ſorts. Theſe oils are made chiefly from the ſeeds of *Seſamum*, of *Tſubaki*, (the *Camellia japonica*) *Kiri*, (the *Bignonia tomentoſa*) *Abraſin*, (*Dryandra cordata*) *Azedarach*, and ſeveral others; ſometimes from the *Rhus ſuccedanea*, *Taxus baccata*, and *Gingko*. In their victuals they make a very plentiful uſe of *muſhrooms*, and the fruit of the *Solanum melongena*, as well as the roots of the *Solanum eſculentum* (batatas) *carrots*, and ſeveral kinds of bulbous roots, and of *beans*. For the deſert, they have *kaki-figs*, *cheſnuts*, *water-nuts*, and *pears*, which are poſſibly often exported from hence to Batavia; beſides *lemons*,

Seville

Seville and *China-oranges*, *ſhaddocks*, *grapes*, &c. Among their valuable fiſhes is what they call the *ray* (by the Dutch called *ſteen-braaſem*,) which is frequently ſold at a very high price, and purchaſed for holidays and feſtival occaſions. The *Perca ſexlineata* (*Ara*) ranks among their fineſt fiſh, and their *Clupea Thriſſa* is ſo fat, that it is equal to the beſt herrings that are caught in Europe. *Salmon* is only found near the *Fakonie* mountains, and is neither ſo large, nor ſo well-taſted as thoſe of Europe. Of *oyſters* and other *ſhell-fiſh*, ſeveral different ſorts are eaten; but always boiled or ſtewed, as likewiſe *ſhrimps* and *crabs*.

DRINK.

TEA and ſacki-beer conſtitute the ſole liquors of the Japaneſe, which fall infinitely ſhort in number of thoſe which the thirſty Europeans can exhibit. Wines and diſtilled liquors they never make uſe of, and can hardly be perſuaded to taſte them, when offered them by the Dutch. Coffee is ſcarcely known, even by the taſte, to a few of the interpreters; and brandy is not with them one of the neceſſaries of life. They have hitherto never ſuffered themſelves to be corrupted

by the Europeans that have viſited them: rather than adopt any practice from others, which might be actually both uſeful and convenient, they have choſen to retain their ancient and primitive mode of life, in its original purity; into which they would not even inſenſibly introduce any uſage or cuſtom, that in the courſe of time might become uſeleſs to them, or detrimental.

Sacki it the name of a kind of beer, which the Japaneſe prepare from rice; it is tolerably clear, and not a little reſembles wine, but has a very ſingular taſte, which cannot be reckoned extremely pleaſant. This liquor, when it is freſh, is more inclined to a white colour; but after it has lain in ſmall wooden caſks, it becomes very brown.

This drink is vended in every tavern, in the ſame manner as wine is ſold in all cellars in Europe, and it conſtitutes their cheer at entertainments, and looſer hours, and is likewiſe uſed as wine, by the more wealthy, at their very meals. It is never drank cold by the Japaneſe, but is warmed in a common tea-kettle, from which it is poured out into flat tea-cups, made of lackered wood, and in this manner it is drank quite warm, which in a very ſhort time heats and inebriates them; but the whole intoxication vaniſhes in a few minutes, and is generally ſucceeded by a diſagreeable head-ach. To Batavia, *ſacki* is imported as an article of commerce; but it is alſo drank there

there out of wine-glaſſes before meals, to provoke an appetite, on which occaſions the white *ſacki* is generally preferred, which is leſs diſguſting to the taſte.

Tea is drank throughout the whole country, for the purpoſe of quenching thirſt; for which reaſon they keep in every houſe, and more eſpecially in every inn, a kettle upon the fire all day long, with boiling water and ground tea; from this the brown decoction is poured out for immediate uſe, and another kettle, filled with cold water, affords them the means of diluting and cooling it. In the houſes of people of diſtinction, viſitors are always preſented with *green tea*, with which the Dutch are entertained, whenever they wait upon any of the privy-counſellors or other perſons in office. This tea is freſh gathered, and ground to powder; boiling water being firſt poured into a can, they put in the tea in its pulverized ſtate, and ſtir it round with a ſtick, in the ſame manner as is uſually done with chocolate, and then pour it out into tea-cups; it muſt be drank immediately, otherwiſe the green powder ſettles at the bottom. No perſon of diſtinction undertakes a journey of any length, without carrying with him a lackered cheſt, which is borne by a man-ſervant, and in which water is kept boiling all the way; ground tea, tea-cups,

and

and every other neceſſary appendage, are ready prepared and at hand.

The tea-ſhrub grows wild in every part of the country, but I met with it moſt frequently growing on the very borders and margins of cultivated lands, or upon ſuch mountains and downs as did not very well anſwer the trouble of cultivation. This plant grows from the ſeed in the courſe of ſix or ſeven years to the height of a man; but already in the third year of its growth it yields ſome produce of its leaves. Thoſe who are ſomewhat accuſtomed to this kind of harveſt, can gather, in the ſpace of one day, ten or twelve pounds weight of them. The older the leaves are, and the later in the year the gathering is made, the greater abundance, it is true, they yield, but then the tea is ſo much the worſe; as the ſmaller leaves, and thoſe which have but juſt ſhot forth, furniſh the fineſt and moſt valuable. The tea, therefore, is gathered annually at three different ſeaſons. The firſt harveſt commences *(at the end of Songvats)* the beginning of March, or the end of February, at which ſeaſon the leaves begin to puſh forth, poſſeſs a viſcous quality, and are gathered ſolely for the uſe of the Emperor, or for people of rank and opulence; whence it takes the name of imperial tea. A month after this, the ſecond harveſt takes place, when the leaves

are

are full grown, but are ſtill thin, tender, and well-flavoured. Again a month, and the principal harveſt commences, when the greateſt quantity is gathered; the leaves having all puſhed forth completely, and become very thick and ſtout. Young ſhrubs always yield better tea than old ones, and ſome places produce it in greater perfection, and more delicious than others.

The tea-leaves are afterwards, for the ſake of drying them, ſpread upon thin plates of iron, which are made hot. During this operation they muſt be continually ſtirred round with both hands, as long as ever the fingers can ſupport the heat. They are next rolled to and fro upon mats, till they grow perfectly cool; and in caſe they are not then ſufficiently dry, they are roaſted and rolled over again, once, or as many times as may be requiſite.

THE SMOKING OF TOBACCO

Was in former times not cuſtomary in this country; but it is probable, that the Portugueſe were the firſt who introduced this practice. The Japaneſe have no other name for tobacco than *tabaco*, which is ſmoked indiſcriminately by both ſexes.

ſexes. The tobacco uſed for this purpoſe, is planted in the country, and is the common *Nicotiana tabacum*. They cut their tobacco into very fine ſhreds, almoſt as fine as human hair: the pipes which they uſe are very ſhort, ſeldom more than ſix inches in length, and are made of lackered bamboo, with a copper mouth-piece and bowl; this latter is ſo ſmall, that it does not contain above a third part or one half of a thimble-full of tobacco, which is twiſted up and crammed in with their fingers. Theſe pipes are ſoon ſmoaked out, in a very few whiffs only, upon which the aſhes are beaten out, and the pipe is filled again; which practice they repeat ſeveral times. The ſmoke is puffed out each time both through the noſtrils and the mouth. Perſons of diſtinction have always the following apparatus for ſmoking: an oblong box, eighteen inches long, a foot broad, and three fingers high, lackered of a brown or black colour, is placed before each perſon; in this box are laid pipes and tobacco, and three cups are placed, which are uſed in ſmoking: one of theſe round cups, which is generally made of thick and ſtout porcelain, or lackered wood, is lined with braſs on the inſide, and is filled with aſhes, in which a live coal is placed, for the purpoſe of lighting the pipe: the ſecond ſerves to receive the aſhes of the tobacco after the pipe is ſmoked out,

out, when this latter is ſtruck with force againſt the edge; and ſometimes it is ſpit upon, in order to quench the ſparks. The third ſupplies the place of a ſpitting-pot, during the time of ſmoking. At viſits, this apparatus is the firſt thing that is placed before the gueſts. One of theſe boxes is ſometimes furniſhed with a lid, which is tied faſt with a ribbon, and is carried by a ſervant, whenever they go to ſuch places, where they do not expect to have tobacco preſented to them. The poorer claſs generally carry both their pipe and tobacco with them, when they go out; the pipe is then put into a caſe, and worn on the right ſide in the girdle at the back of their loins; the tobacco-pouch is hardly of the breadth of a hand, and ſomewhat ſhorter, furniſhed with a flap at the top, which is faſtened together with a little ivory hook; this pouch is likewiſe ſlung to the girdle by means of a ſilken cord, and a bead of cornelian, or a piece of agate: it is made for the moſt part of a particular kind of ſilk, with interwoven flowers of ſilver and gold.

FESTIVAL SPORTS AND GAMES.

ALTHOUGH gravity forms the general character of the Japaneſe nation, this ſerious diſpoſition, however, does not prevent them from having their pleaſures, their ſports, and feſtivities. Theſe are of two kinds, occaſional or periodical, and conſtitute part of their worſhip: the latter, in many reſpects, may be compared to our plays. Their chief feſtivals are the *Feaſt of Lanthorns*, and what is called the *Matſuri*.

The *Lanthorn-Feſtival*, or *Feaſt of Lamps*, is celebrated towards the end of Auguſt, and is called by the natives *Bong*. It laſts three days; but the ſecond afternoon, with the following night, are kept with the greateſt feſtivity. It was originally inſtituted in memory and honour of the dead, who, they believe, return annually to their kindred and friends on the firſt afternoon of theſe games; every one viſiting his former houſe and family, where they remain till the ſecond night, when they are to be ſent away again. By way of welcoming them on their arrival, they plant ſtakes of bamboo near all the tombs, upon which they hang a great number of lanthorns, with lights, and thoſe ſo cloſe to each other, that the whole mountain appears illuminated: theſe lanthorns are kept alight till nine or ten o'clock at night.

ht. On the ſecond evening, when the ſpirits
ie defunct are, according to their tradition,
ɔe ſent away again, they fabricate a ſmall
el of ſtraw, with lights and lanthorns in it,
ch they carry at midnight in proceſſion, with
il and inſtrumental muſic, and loud cries, to
ſea-ſhore, where it is launched into the wa-
and left to the wind and waves, till it either
hes fire and is conſumed, or is ſwallowed up
he waves. Both of theſe illuminations, con-
g of ſeveral thouſand fires, exhibit to the eye
uncommonly grand and beautiful ſpectacle.
he feaſt of *Matſuri* is celebrated upon ſome
tain feſtival day, and in honour of ſome par-
ular god. Thus, for inſtance, in the town of
agaſaki, where I was preſent at one of theſe
tivals, it is celebrated in memory of *Suwa*, the
elar deity of the town. It is celebrated on
ninth day of the ninth month, which is the
y of this idol's nativity, with games, public
nces, and dramatic repreſentations: the feſtival
mmences on the ſeventh day, when the tem-
s are frequented, ſermons are preached, pray-
are offered up, and public ſpectacles are exhi-
ed; but the ninth day excels all in pomp and
penſive magnificence, which they vary every
ne in ſuch a manner, that the entertainments
the preſent year bear no reſemblance to thoſe of
laſt; neither are the ſame arrangements made.

The

The expences are defrayed by the inhabitant the town, in ſuch manner, that certain ſtr exhibit and pay the expences of certain pi and parts of the entertainment. I, together v the reſt of the Dutch, had an invitation ſent to be a ſpectator of this feſtival, in 1776, wh was celebrated in a large open ſpot in the tc of Nagaſaki. A capacious houſe, reſembli large booth, raiſed upon poſts, and provi with a roof and benches, was erected on ſide, for the convenience of the ſpectators. T conſiſted not only of the magiſtrates and ec ſiaſtics, but likewiſe of foreigners; and a gu was placed to keep off the croud. Firſt of appeared the prieſts, carrying the image the idol *Suwa*, and took their places, habited black and white. A company of ten or twe perſons played upon inſtruments of muſic, a ſang the exploits of their gods and heroes; the mean time that a party of virgins danci diſplayed the moſt enchanting elegance in th geſtures and deportment. The muſic conſiſ in a mere rattling noiſe, which might perh found more grateful in the idol's, than human ears. A large paraſol was next int duced, inſcribed with the name of the ſtreet, a emblazoned with its coat of arms, followed b band of muſicians, in maſks, with drums, flut bells, and vocal muſic. Theſe were ſucceec

the device itſelf, which was different for ery ſtreet; then followed a band of actors; and lly, the inhabitants of the ſtreet, in ſolemn oceſſion, with an innumerable and promiſcu- s croud at their heels. This progreſſive march ted nearly a whole hour, after which they arched back again in the ſame order, and a cond proceſſion ſucceeded in its place; this s followed by a third, and ſo on, during the hole forenoon. The inhabitants of each ſtreet ed with each other in magnificence and in- ntion, with reſpect to the celebration of this tival, and in diſplaying, for the moſt part, ch things as were characteriſtic of the various oduce of the mines, mountains, foreſts, navi- tion, manufactures, and the like, of the pro- ce from which the ſtreet derived its name, whence it had its inhabitants.

ays I had an opportunity of ſeeing acted al times, both in Nagaſaki and during my ney to the imperial court at Oſaka. The tators ſit in houſes of different dimenſions n benches; facing them, upon an elevated, ſmall and narrow place, ſtands the theatre f, upon which ſeldom more than one or two ors perform at a time. Theſe are always ſſed in a very ſingular manner, according as ir own taſte and fancy ſuggeſt, inſomuch that ſtranger would be apt to believe, that they

exhibited themſelves not to entertain but t
frighten the audience. Their geſtures, as we
as their dreſs, are ſtrangely uncouth and extr
vagant, and conſiſt in artificial contortions
the body, which it muſt have coſt them muc
trouble to learn and perform. In general th
repreſent ſome heroic exploit or love-ſtory
their idols and heroes, which are frequently co
poſed in verſe, and are ſometimes accompani
with muſic. A curtain may, it is true, be let f
between the actors and the ſpectators, and for
neceſſary pieces be brought forward upon t
theatre; but in other reſpects, theſe ſmall theat
have no machinery nor decorations, which c
entitle them to be put in compariſon with th
of Europe. I did not obſerve that public ſp
tacles contributed any more in this country t
in other places, to reform the manners of
people; as the deſign of them appears to
ſame here as in other parts of the world, a
they tend rather to amuſe the idle frivol
mankind with jugglers tricks, than to amen
heart, rather to fill the pockets of the a
than to be of any real benefit to the ſpectat

When the Japaneſe wiſh at any time to e
tain the Dutch, either in the town of Naga
or more particularly during their journey to
imperial court, they generally provide a *ban*
female dancers, for the amuſement of their gue

The

Theſe are generally young damſels, very ſuperbly dreſſed, whom they fetch from the inns; ſometimes young boys likewiſe are mixed among them. Such a dance requires always a number of perſons, who turn and twine and put themſelves into a variety of artificial poſtures, in order to repreſent an amorous or heroic deed, without either ſpeaking or ſinging; their ſteps are however regulated by the muſic which plays to them. The girls are in particular provided with a number of very fine and light night gowns, made of ſilk, which they ſlip off one after the other, during the dance, from the upper part of their body, ſo as frequently to have them, to the number of a dozen together, ſuſpended from the girdle which encircles their loins. Their dances therefore correſpond, in ſome meaſure, with our country-dances, although, upon the whole, they widely differ even from theſe.

Their *weddings* and *funerals* may likewiſe claim a place among their feſtivals, although they do not celebrate them with the ſame pomp as do the Europeans and other nations.

Marriages are ſolemnized upon a pleaſant eminence without the towns, in the preſence of the relations and the prieſts, when the following ceremonies are obſerved. The bridegroom and the bride advance together to an altar erected for that purpoſe, each holding a torch in their hand;

whilſt the prieſt is employed in reading a certain form of prayer, the bride, who occupies the right-hand place, firſt lights her torch from a burning lamp, and then holds it out to the bridegroom, who lights his torch from hers; upon which the gueſts wiſh the new married couple joy. In this country the men are not allowed a plurality of wives, as in China, but each man is confined to one, who has liberty to go out and ſhew herſelf in company, and is not ſhut up in a recluſe and ſeparate apartment, as is the cuſtom with their neighbours. Inſtances of divorces ſometimes occur among them, but theſe caſes are not very common. The more daughters a man has, and the handſomer they are, the richer he eſteems himſelf, it being here the eſtabliſhed cuſtom for ſuitors to make preſents to their father-in-law, before they obtain his daughter.

Fornication is very prevalent in this country; notwithſtanding which, chaſtity is frequently held in ſuch high veneration, both with married and ſingle, that when they have been injured in this point, they ſometimes lay violent hands upon themſelves. In this country likewiſe the diſhonourable practice of keeping miſtreſſes obtains with ſome, but the children they bring into the world cannot inherit, and the miſtreſſes are conſidered as ſervants in the houſe.

The

The Japaneſe either burn their dead to aſhes, or elſe bury them in the earth. The former method, as I was informed, was in ancient times much more cuſtomary than it is at preſent, though it is ſtill practiſed with perſons of diſtinction. This ceremony is not always performed on a funeral pile in the open air, but takes place at times in a ſmall houſe of ſtone, calculated for that purpoſe, and furniſhed with a chimney. The aſhes are carried away in a coſtly veſſel, and preſerved for ſome time in the houſe at home, after which they are buried in the earth. Both men and women follow the corpſe in norimons, together with the widow and children of the deceaſed, and a numerous train of prieſts, who ſing all the time. After one of the prieſts, has ſung the eulogy of the deceaſed, he waves thrice over the corpſe a burning torch, and then throws it away; upon this it is picked up by the children or other relations, and the pile ſet on fire with it. Thoſe who are interred without being firſt burned, are incloſed in a wooden cheſt, after the cuſtomary manner, and let down into the grave. The children are very much attached to their parents, even after their death. During the interment, and after the ſame, fragrant ſpices are caſt into the grave, and the fineſt flowers are planted upon their tombs. The ſurvivors continue to viſit the manſions of the dead for ſeveral

years, and not unfrequently during their whole lives; repeating their viſits at firſt every day, then every week; after that once a month, and at laſt once a year, excluſively of the Lanthorn Feſtival, which is celebrated every year in honour of the defunct.

SCIENCES.

THE Sciences in general fall infinitely ſhort in Japan of that exalted pre-eminence, to which they have attained in Europe. The *Hiſtory* of their own country, may, however, perhaps be deemed more authentic here than that of moſt other nations, and this together with the ſcience of houſe-keeping, is ſtudied, without exception, by them all. *Agriculture*, which the Japaneſe conſider as the moſt neceſſary and uſeful ſcience, for the proſperity and ſtability of the empire, is in no place in the world ſo much eſteemed as here; where neither foreign nor civil wars, nor emigrations leſſen their population; and where they never think of encroaching upon the territories of other nations; nor yet of introducing the unneceſſary and often detrimental productions of other climates: but where, on the contrary, their

their whole care is directed in the higheſt degree, that not a ſingle ſod of earth ſhall lie fallow, nor the revenue of the earth be unthriftily employed.

Aſtronomy is in great favour and repute; notwithſtanding which they are unable, without the aſſiſtance of the Chineſe and Dutch Almanacs, to compoſe a perfect Calendar, or to compute to minutes and ſeconds an eclipſe of the ſun or moon. *Medicine* neither has attained, nor is it likely that it ever will attain to any degree of eminence. With *Anatomy* they are totally unacquainted, and their knowledge of diſeaſes is very imperfect, involved in error, and frequently in fable: *Botany* and the knowledge of remedies, conſtitute the whole of their medical knowledge. Of *Natural Philoſophy* and *Chemiſtry*, the Japaneſe have little more idea than what they have lately learned from the Phyſicians of Europe. *Law* is not here a tedious and complicated ſtudy: no nation upon earth has a ſmaller code, and fewer judges. Commentators upon the Statutes, and Advocates are here totally unknown; but in no country perhaps are the laws more ſtrictly carried into execution, without any regard to perſons, and without partiality, or violence. The laws are ſevere, and law-ſuits ſhort. The original *Language* of the country, in oppoſition to that of all other nations, is at once copious and expreſſive. Of foreign languages, Chineſe

is learned by thoſe who devote themſelves to ſtudy, and read Chineſe books and writings. The Interpreters and ſome of their Phyſicians even learn the Dutch language, and ſome of theſe underſtand a little Latin; a language which for nearly two thouſand years has given more trouble to youth in the ſchools of Europe, than in general they have derived benefit from it. Their *Morality* does not conſiſt in any curious labours of the brain, but in ſimple and rational doctrines, which they endeavour to reduce to practice in their conduct by leading a virtuous life. And this morality is preached and enforced by all their religious ſects, and is never detached, from their divinity, with which it ſtands in the cloſeſt connexion. The *Science of War*, is with theſe Orientals very ſimple: courage, fortitude, and love of their country, make ample amends for their ignorance of military tactics; and with theſe qualifications they have hitherto always proved victorious, and never once been obliged to bow their necks to their enemies. Four hundred and ſeventy-one years before the commencement of our æra, we find the firſt mention made of war in the Japaneſe Hiſtory. After that period they have been ſeveral times diſturbed by foreign forces. Anno 1284, after the Tartars had ſubdued China, Mooku, their General, ſent 4000 veſſels, and 240,000 men to conquer

conquer Japan, but without being able to accompliſh his aim.

The *Art of Printing* is unqueſtionably very ancient in this country; but they always uſed, and ſtill continue to uſe plates for this purpoſe, without having any knowledge of moveable types. They print upon one ſide of the paper only, on account of its thinneſs, as otherwiſe the ink would ſink through. They have even a knowledge of *Engraving*, although in the *Art of Drawing* they remain vaſtly inferior to the Europeans, over whom they however boaſt this decided preference, that they always draw ſome animal, plant, or other object, that exiſts in nature, and do not heap together upon tapeſtry or other kinds of paintings, fantaſtical figures of things, which have no actual exiſtence; a circumſtance, which has hitherto ſo little engaged the attention of our artiſts, and which would do no little credit to an enlightened and ſenſible European. *Surveying* they underſtand tolerably well, and poſſeſs accurate maps, both of their country in general and of its towns. Beſides the general map of the empire, I have ſeen ſpecial maps of Jedo, Miako, Oſaka, and the town of Nagaſaki, which I likewiſe contrived to carry out of the country with me, notwithſtanding the great danger with which this was attended, and the ſtricteſt prohibitions

to

to the contrary. Like the Chineſe, the Japaneſe *write* in upright rows, or columns, from the top to the bottom, and then down again, beginning at the right hand and ſo proceeding to the left, forming their letters with a pencil made of hare's hair, and touſche, or Indian ink, which they rub every time with water upon a ſtone. *Poetry* is a favourite ſtudy with this nation, who employ it to perpetuate the memory of their gods, heroes, and celebrated men. *Muſic* is likewiſe held in high eſtimation, but hitherto they have neither been able to bring their muſical inſtruments to any degree of perfection, nor yet have they made any progreſs in the ſcience of harmony. At feſtivals, and on other grand occaſions, they make uſe of drums, fifes, ſtringed inſtruments, bells, horſe-bells, and other muſical inſtruments. The ladies eſpecially are very fond of muſic, and even learn to perform upon different inſtruments themſelves; but their favourite inſtrument is a kind of lute with four ſtrings, which they ſtrike with the fingers, and will paſs whole evenings at this diverſion, although it is not very pleaſant. The *koto* bears a ſtrong reſemblance to our dulcimers, having a number of ſtrings, which are ſtruck with ſticks; and is inconteſtibly the moſt agreeable inſtrument they have.

In

In ſeveral places, for the inſtruction of children in reading and writing, public *Schools* are eſtabliſhed, in which all the children read aloud, and make a terrible noiſe. The children are in general educated without chaſtiſement and blows; in their infant years ſongs are ſung to them in praiſe of their deceaſed heroes, which tend to encourage them in the practice of virtue and conſtancy. In youth they are admoniſhed with ſerioufneſs, and good examples are held up for their imitation.

Arts and *Manufactures* are carried on in every part of the country, and ſome of them are brought to ſuch a degree of perfection, as even to ſurpaſs thoſe of Europe; whilſt ſome, on the other hand, fall ſhort of European excellence. They work extremely well in *Iron* and *Copper*, and their *Silk* and *Cotton* manufactures equal, and ſometimes even excel, the productions of other eaſtern countries. Their *Lacquering* in wood, eſpecially their ancient workmanſhip, ſurpaſſes every attempt which has been made in this department by other nations. They work likewiſe with great ſkill in *Sowas*, which is a mixture of gold and copper, which they underſtand how to colour blue or black with their touſche, or ink, by a method hitherto unknown to us. They are likewiſe acquainted with the art of making *Glaſs*, and can manufacture it for any purpoſe, both coloured

coloured and uncoloured. But window-glaſs, which is flat, they could not fabricate formerly. This art they have lately learnt from the Europeans, as likewiſe to make watches, which they ſometimes uſe in their houſes. In like manner they underſtand the art of *Glaſs grinding*, and to form Teleſcopes with it, for which purpoſe they purchaſe mirror-glaſs of the Dutch. In the *working of Steel* they are perfect maſters, of which their incomparable ſwords afford the moſt evident proof. *Paper* is likewiſe manufactured in great abundance in this country, as well for writing and printing, as for tapeſtry, handkerchiefs, clothes, for packing of goods, &c. and is of various ſizes and qualities. They prepare it from the bark of a ſpecies of Mulberry-tree, *Moras papyrifera*. The method is as follows. After the tree has ſhed its leaves in the month of December, they cut off the branches about three feet in length, which they tie up in bundles, and boil in a ley of aſhes, ſtanding inverted in a covered kettle, till ſuch time as the bark is ſo ſhrunk, that half an inch of the woody part is ſeen bare at the ends. They are then taken out and left in the open air to cool, cut up lengthwiſe, and the bark is ſtripped off. Upon this the bark is again ſoaked three or four hours in water, and when it is become ſoft, they ſcrape off the fine black ſkin with a knife. The next thing

thing to be done is, to ſeparate the coarſe bark from the fine, which produces the whiteſt paper. The older the branches are, the coarſer is the paper. The bark is now boiled again in freſh ley, and the whole continually ſtirred with a ſtick, and freſh water added to it, till the fibres ſeparate. The waſhing of it, which is a nice and delicate operation, is then performed in a brook, by means of a ſieve, by ſtirring the bark inceſſantly about till the whole is reduced to the conſiſtence of a fine pap, and, thrown into water, ſeparates in the form of meal. It is then further mixed in a ſmall veſſel with a decoction of *Rice* and the *Hibiſcus manibot*, and ſtirred well about, till it has attained a tolerable conſiſtence. After this it is poured into a wider veſſel, from whence the ſheets are taken and put into proper forms, made of graſs-ſtraw, and laid one upon another in heaps, with ſtraw between, that they may be eaſily lifted up. They are farther covered with a board, and preſſed, at firſt lightly, but afterwards and gradually harder, till the water is ſeparated. When this is done, they lay the ſheets upon a board, dry them in the ſun, and then gather them into bundles for ſale and uſe. An inferior kind of paper is likewiſe manufactured from the *Morus Indica*.

The *lackered* wood-work, which is executed in Japan, excels the Chineſe, the Siameſe, and indeed

indeed that of all other nations in the world. For this purpoſe they make choice of the fineſt ſort of firs and cedars, and cover them with the very beſt varniſh, which they prepare from the *Rhus vernix*, a tree that grows in great abundance in many parts of the country. This varniſh, which oozes out of the tree on its being wounded, is procured from ſtems that are three years old, and is received in ſome proper veſſel. When firſt caught, it is of a lightiſh colour and of the conſiſtence of cream; but grows thicker and black on being expoſed to the air. It is of ſo tranſparent a nature, that when it is laid, pure and unmixed, upon boxes and other pieces of furniture, every vein of the wood may be clearly ſeen. For the moſt part a dark ground is ſpread underneath it, which cauſes it to reflect, like a looking-glaſs; and for this purpoſe recourſe is frequently had to the fine ſludge, which is caught in the trough under a grind-ſtone. At other times ground charcoal is uſed, and occaſionally ſome black or red ſubſtance is mixed with the varniſh, and ſometimes leaf-gold, ground very fine, when it is called *Salplicat*. This lackered work is afterwards for the moſt part embelliſhed with gold and ſilver flowers and figures laid on upon the varniſh, which, however, are liable to wear off in time; ſometimes one ſees theſe figures emboſſed upon the varniſh,

more eſpecially in old work, which is greatly eemed, and being rare, fetches a high price. his varniſh, which hardens to a tranſparent difficultly ſoluble gum, will not endure any vs, but flies and cracks, almoſt like glaſs; igh it can ſtand boiling water without re- ving any damage. With this they varniſh r the poſts of their doors and windows, their wers, cliſts, boxes, ſcymitars, fans, tea-cups, ſoup-diſhes, their norimons, and moſt arti- of houſehold furniture, which are made of od.

No Japaneſe is allowed to leave his native and viſit foreign countries; this being pro- ted, under penalty of death. So that the g voyages which the people of this nation for- ly undertook in their own veſſels to Coræa, na, Java, Formoſa, and other places, can be longer performed, and the art of navigation ſt of courſe be upon the decline. This, how- r, does not prevent them from making ſhort *ages* between the rocks, with an inconceivable nber of trading veſſels, of different ſizes, as wiſe with fiſhing-ſmacks. They ſeldom ven- out far enough at ſea to loſe ſight of land, always take care to have it in their power to every evening into ſome port, or elſe to come o ſome other place of ſafety, in caſe of ſud- ſtorms. Yet they are provided with a com-

paſs,

paſs, which is not divided into ſo many points, thoſe which the Europeans make uſe of, b their veſſels are open at the ſtern, ſo that th cannot weather the open ſea; and their rudd are large and inconvenient.

The Japaneſe have little *furniture* in t houſes beſides their apparatus for the kitch and what they uſe at their meals. Of th however, as likewiſe of clothes and other ceſſaries, one ſees ſuch an incredible quan expoſed for ſale in the ſhops of their tradeſn both in town and country, that one is lec wonder where they can find purchaſers, would be apt to ſuppoſe, that they kept ma zines here to ſupply the whole world. Here native may ſelect, according to his varying t and fancy, all his cloathes ready made, and be furniſhed with ſhoes, umbrellas, lack ware, porcellain, and a thouſand other artic without having occaſion to beſpeak any th before-hand.

THE LAWS AND POLICE.

IF the laws in this country are rigid, the P is equally vigilant, and diſcipline and good o are as ſcrupulouſly obſerved. The happy co

qu

quences of this are extremely viſible and important; for hardly any country exhibits fewer inſtances of vice. And as no reſpect whatever is paid to perſons; and at the ſame time the laws preſerve their priſtine and original purity, without any alterations, explanations, and miſconſtructions, the ſubjects not only imbibe, as they grow up, an infallible knowledge of what ought, or ought not to be done, but are likewiſe enlightened by the example and irreproachable conduct of their ſuperiors in age.

Moſt crimes are puniſhed with *death*, a ſentence, which is inflicted with leſs regard to the magnitude of the crime, than to the audacity of the attempt to tranſgreſs the hallowed laws of the empire, and to violate juſtice, which, together with religion, they conſider as the moſt ſacred things in the whole land. *Fines* and pecuniary mulcts and amercements they regard as equally repugnant to juſtice and reaſon; as the rich are thereby freed from all puniſhment; a procedure, which to them appears the height of abſurdity. Murder is puniſhed with death; and, if this crime is perpetrated in a town, or in the open ſtreet, not only the murderer himſelf, but ſometimes his relations and dependants, and even the neighbours, partake in the puniſhment, accordingly as they have been more or leſs accomplices in the crime, or have neglected to

prevent its perpetration. To draw one's ſword upon any one, is likewiſe a capital offence. Smuggling of all kinds is puniſhed with death without mercy, and the puniſhment extends to every individual concerned in the traffic, both buyers and ſellers. Every death warrant muſt be firſt ſigned by the National Council in Jedo, before it is carried into execution; previous to which alſo the culprit has a fair trial before the proper tribunal, and witneſſes are heard. The general mode of puniſhment is private decapitation with a ſcymitar, in priſon, although crucifixion and other painful modes of death are ſometimes practiſed in public. Thoſe, whoſe crimes do not merit death, are either ſentenced to perpetual impriſonment, or elſe baniſhed to ſome diſtant iſland, when all their property is confiſcated. In the towns it often happens that the inhabitants of a whole ſtreet are made to ſuffer for the malpractice of a ſingle criminal; the maſter of a houſe for the faults of his domeſtics, and parents, for thoſe of their children, in proportion to the ſhare they may have had in the tranſaction. In Europe, which boaſts a purer religion, and a more enlightened philoſophy, we very rarely ſee thoſe puniſhed, who have debauched and ſeduced others, never ſee parents and relatives made to ſuffer for neglecting the education of their children and kindred, at the ſame time

that theſe heathens ſee the juſtice and propriety of ſuch puniſhment. The *Priſons* are in this country, it is true, as in moſt others, gloomy and horrid; the rooms are, however, kept clean and wholeſome, and conſiſt of an apartment for the trial by torture, and another for private executions; a kitchen, a dining room, and a bath.

The *Impoſts* in the empire are different in the towns and villages, and in different places. Beſides the conſiderable preſents which *Kubo* receives annually from all the feudal Princes, and from the Dutch Company, this temporal Monarch has his revenues from certain towns and diſtricts. The Princes derive their revenues, each from his province, and the towns which the ſame contains; and their revenues differ in value, according to the ſituation of the province itſelf, its opulence, extent, population, and cultivation. Each proprietor of a houſe is aſſeſſed in proportion to the breadth of his houſe towards the ſtreet, beſides the preſents he makes to the civil officers, and the taxes he pays for the ſupport of the temples and idols. The town of Nagaſaki contains ninety-ſtreets, and ſixty-two temples, or thereabouts, and the produce of its taxes amounts to about three *mangokſ*. The country is rated according to its produce, and this conſiſts, for the moſt part, in rice. Foreſts and other little cultivated tracts of land are rated lower.

A Receiver General, or *Voigt*, collects this important impoſt. Arable land is divided into three claſſes, according to its different degree of fertility. The man that cultivates a freſh portion of land, holds it free of all taxes after the firſt two or three years. In order to make an eſtimate of the value of a piece of ground, which, in ſpring, frequently lies under water, and at the ſame time of the lord of the manor's income from it, lands of this deſcription are ſometimes meaſured twice a year, viz. in ſpring and in harveſt-time. The taxes levied upon landed eſtates are extremely heavy, and frequently amount to more than half, or even two-thirds of the produce. In order to calculate them, they meaſure off a portion of land, of which they cut down the corn, and thraſh it for a ſpecimen, and from thence afterwards calculate what may be the amount of the produce of the whole. The land belongs always to the Crown or to the Prince, and the Farmer holds it in fee no longer than while he cultivates it with proper care and attention.

In every town the moſt excellent *order* is kept up, for the preſervation of the welfare, peace, conveniency, and ſecurity of the community. For this purpoſe four Burgomaſters are appointed, of which number one preſides every year, who is their prolocutor, ſpeaking in his own name

name and thoſe of his companions, and is called *Ninban*. Beſides theſe an *Ottona* is appointed for every ſtreet, who acts in the capacity of Commiſſary, and is obliged to give in his report to the Burgomaſter concerning every thing that happens: this officer has ſeveral of the town-officers under him, to execute his commiſſions. His duty is to ſet down the names of all that are born or die in his ſtreet, or marry, or travel, or remove thence, or arrive there; he likewiſe promotes union and concord among the inhabitants, and has the power of caſting offenders into priſon and even of putting them in irons. This office is choſen by the inhabitants of the ſtreet, and paid from the private revenue of the ſtreet over which he preſides. Lodgers have not the privilege of voting. Lodgings are paid for by the month, the rent being in proportion to the ſize of the room, which is aſcertained by the number of mats upon the floor. Each Ottona has three *Aſſeſſors* as his coadjutors, a *Secretary*, who ſets down every thing that comes under the cognizance of the office, and a *Caſhier*. The *Town-officers* act at the ſame time in the capacity of ſpies, who give the Ottona accurate intelligence of every thing that occurs. Each ſtreet is, as it were, detached from the reſt by gates at each end, which being ſhut on the approach of any tumult, cut off all communication with the other

ſtreets, ſo that no perturbator of the peace can eſcape by flight.

Moſt admirable meaſures are adopted in the towns for the prevention of *fires*. The Burghers, including both houſe-keepers and lodgers, keep watch themſelves. Two keep watch every night, and their perſons are conſidered ſo ſacred, that it is a capital offence to attack them whilſt on duty. Of theſe, one is conſtantly with the main guard, and whenever any apprehenſion is entertained of danger, the watch is doubled. The other goes the rounds, and is properly ſpeaking, the fire-watch; in which capacity he perambulates the ſtreets, and gives notice of the hour by ſtriking two pieces of wood againſt each other. Ladders are kept in readineſs at the gates, and every other apparatus for extinguiſhing fire is conſtantly at hand, and in the beſt order. In the day time certain officers are ſtationed at the churches, who ſtrike the clock with a wooden clapper, in order to ſhew, what hour of the day it is. Beſides this, in every tavern and inn ſuch peace and order are obſerved, that one ſeldom ſees any inſtance of frays and drunkenneſs, irregularities which ſo greatly and ſo commonly diſgrace the Northern part of the Weſtern World.

That they will be truſty and upright, the Officers of Juſtice take a very ſtrict *Oath*, on entering

entering on their office, and this is ſometimes repeated every year. Sometimes likewiſe they are changed, in order that they may not be too long in one place, and in the courſe of time ſeduced from the paths of probity. And foraſmuch as the puniſhments in this country are exceedingly ſevere, and the laws at the ſame time immutable, it may be affirmed with great truth, that fewer crimes are committed, and fewer puniſhments inflicted, than in other populous countries, where, notwithſtanding the number of puniſhments yearly inflicted, a multitude of criminals remain concealed, or fall upon ſome expedient to fly from the ſpot, or in ſome other manner eſape the puniſhment they ſo juſtly merit. I heard the following extraordinary circumſtance mentioned by one of the Interpreters, viz. that there were *laws*, which did not make known the puniſhment, and that for many crimes the puniſhment was not univerſally known. They were of opinion, that a perſon ought not to be the leſs on his guard againſt crimes and tranſgreſſions, although the Sovereign did not think proper to determine and make known the ſpecies of puniſhment; and probably they have good reaſon for thinking thus. However, that no man may plead ignorance of the laws, they are promulgated not only once or twice from the pulpit, according to the cuſtom

in the Chriſtian churches, but likewiſe in every town and village they are poſted up for public inſpection and daily peruſal, in large letters, being placed conſpicuous in an open ſpot ſurrounded and guarded with rails. This place, in the towns, is immediately within the city gates; in the villages, it occupies the middle. Directions what ought, or ought not to be done, are drawn up very conciſe, without ſpecifying the puniſhment annexed to diſobedience, or the addition of any menaces, of which the governments in ſome parts of Europe, ſo renowned for its juriſprudence, have ſuch a plentiful ſtore. One ſometimes perceives on the weſt ſide of croſſes and poſts, that are erected without the towns and villages, the places, where formerly a greater number of criminals than at this time preſent made their exit, and migrated to another world.

PHYSICIANS

Are of ſeveral deſcriptions. Some profeſs only Medicine, and occupy themſelves with the cure of internal diſorders. Others practiſe Surgery; others only burn with Moxa; others perform no other operation than that of puncturing with

with needles, (the *acu-punctura,)* and others again go about making frictions. Thoſe who perform the latter of theſe operations may be heard in the evening patrolling the ſtreets, and making a tender of their ſervices with great noiſe and vociferation. In a country where colds are ſo frequent, this chafing of the body is very beneficial. Thoſe who cure internal diſorders, are conſidered as ſuperior to the reſt, from whom they are diſtinguiſhed by their heads being ſhaved all over. They never make uſe of any other than ſimple remedies, and thoſe generally in the form of decoctions, which are either diuretic or ſudorific. Sometimes they make uſe of powders likewiſe. Of compound medicines they have no knowledge. A great part of theſe remedies may be procured, it is true, within the precincts of their own kingdom, but a very conſiderable quantity is ſold to them by the Chineſe. Their Phyſicians ſometimes feel the patient's pulſe; but they take a long time for examination, ſometimes not leſs than a full quarter of an hour, feeling it firſt in one arm and then in the other; as though the blood did not flow into both arteries from one and the ſame ſource. Their knowledge of Fevers and other internal diſorders can be no other than very ſuperficial, and their mode of cure very precarious, as their Phyſicians have no inſight into Anatomy and Phyſiology,

Phyſiology, and are very little acquainted with the remedies which they preſcribe. The only perſons among them, who have a little more knowledge of theſe matters, are either the Phyſicians of the Court, or the Dutch Interpreters, who have an opportunity of acquiring ſome degree of knowledge from the European Phyſicians.

Burning with *Moxa* and puncturing with needles are two very eſſential and cuſtomary operations throughout the whole empire, and are performed, in fact, as often as ever Phlebotomy is in Europe. *Moxa* is made uſe of, not only for curing, but likewiſe for preventing diſeaſes; no exception is here made either for ſex or age; every one makes uſe of it, old and young, children, rich and poor, and even the priſoners themſelves. There are few parts of the body which do not allow of this operation, as for inſtance, the ſinews, *(tendines)* veins, &c. but the fleſhy parts, and more eſpecially the back, are conſidered as the propereſt places, which are therefore carefully ſelected by the operators, and of which they have printed tables. It is of uſe in moſt diſorders, but eſpecially in the Pleuriſy, Tooth-ach, and it proves of the greateſt ſervice in Gout and Rheumatiſms. *Moxa* is nothing elſe than the woolly part *(tomentum)* of the leaves of Mugwort, *(Artemiſia vulgaris)* particularly of the old leaves. It is prepared in the following

following manner: the leaves are beaten and rubbed with the hands, till all the green ſeparates from them, and nothing but the woolly part remains. Of this there are two ſorts, the coarſe and the fine. The fine is conſidered as the beſt, and the coarſe is commonly uſed for tinder. When it is to be applied, a little ball is made of it, which is laid upon the appointed place, and then ſet fire to, when the fire gradually conſumes it, and at the ſame time burns the ſkin, leaving behind it a ſcar, which ſome time after breaks, and a humour diſtils from it.

Acu-puncture, or puncturing with a needle, is generally performed with a view of curing the colic, eſpecially that kind which here has the name of *Senki*, and is commonly occaſioned by the drinking of Sacki. Thus it has the ſtomach for its object, over which ſeveral ſmall holes, often to the number of nine, are made, under the idea of promoting the diſcharge of wind; but other fleſhy parts of the body likewiſe may be ſelected for this operation. The needles uſed on theſe occaſions are very fine, nearly as fine as the hair of one's head, being made of gold or ſilver, by perſons who have the privilege of making them, and who alone underſtand how to give them the temper, pliability, and fineneſs, which it is requiſite for them to have. While they are paſſing through the ſkin, they are twirled

twirled round between the fingers, and the bony parts are carefully avoided.

The *diſeaſes*, to which the Japaneſe are moſt liable, and which are peculiar to this country, are the abovementioned Colic, which is here called *Senki*, watery eyes, and indurated glands. The *Senki* Colic, which proceeds from the uſe of Sacki, or Rice-beer, attacks great numbers of people, and likewiſe ſtrangers, who reſide any length of time in the country. The pain is violent and intolerable, and often leaves ſwellings behind it, in different parts of the body; and is eſpecially productive of the *Hydrocele*. Red and *watery* eyes are very common among the peaſants, and the poorer kind of people in the villages, and originate partly in the ſmoke of the coals, with which they warm their rooms in winter, and partly from the ſtench which exhales from their privies. Indurated glands were very common in every part of the country, and frequently, I obſerved, turned to cancers. They happen particularly in the neck, and increaſe daily from the ſize of a pea to that of a man's fiſt. As the heat in the day time is frequently very intenſe, and a ſudden guſt of wind ariſing is very apt in thoſe circumſtances to ſtop the pores, and prevent perſpiration; it follows of courſe, that the Rheumatiſm muſt be very prevalent among them; in like manner, as for the

ſame

ſame reaſon, during the ſummer months, *Diarrhœas* and *Dyſenteries* attack both the Europeans and Japaneſe. The ſame is likewiſe apt to be the caſe, when they imprudently eat too much of the fruit, the produce of the country, and more eſpecially of the *Kaki-figs*, which are very palatable and in high eſtimation.

The *Small-pox* and the *Meaſles* have been long prevalent in this country, and are not more dreaded here than in other places. I did not ſee a great many people that were much defaced by them: they are unacquainted with Inoculation. The *Hydrocephalus*, or Dropſy in the head, I had an opportunity of ſeeing in a man thirty-three years old, who came to aſk my advice during my journey to the court. He related to me, that he had been attacked with this diſorder nineteen months ago, in conſequence of having received ſeveral blows upon his head from a bamboo cane, in a fray with a another man, although the cane was covered with linen. From the crown to the back part of the head a tumor was perceived, about the thickneſs of a finger, and the bones of the ſcull were elevated to that degree, that the hindermoſt part of the fontanel was felt ſoft.

A ſpecies of *Miliary Eruption*, termed by the Europeans the *Red Dog*, is very rife here in the hotteſt ſummer months, viz. in Auguſt and September,

tember, particularly among the Europeans. It continues for ſeveral weeks and ſometimes for months together. The eruption is elevated above the ſurface of the ſkin, rough and of a red colour, without fever. Sometimes it partly diſappears, and at other times it becomes viſible in greater quantity, eſpecially about noon and evening. The diſorder is not always attended with an itching; but whenever this concomitant ſymptom appears, it is moſt troubleſome in the evening and at night, being attended with great reſtleſsneſs and want of ſleep. Sometimes a very ſingular kind of itching ſupervenes, which is chiefly felt when the patient is in motion, when he ſets himſelf down in a chair, or leans with his back againſt a wall, or is lying in bed, or folds his arms. On theſe occaſions a ſenſation of pricking is felt in the ſkin, as if it were pierced with a thouſand fine needles; and this ſenſation ceaſes immediately, as ſoon as the limb which was in motion is kept ſtill, even if the ſame poſition be preſerved. The face is free from this eruption, which diffuſes itſelf over every other part of the body, even to the very extremities of the fingers. A perſon may be afflicted with this diſorder ſeveral times, during his reſidence in India.

The *Venereal* Diſeaſe was without doubt imported by the Europeans, who have the ſuperlative

lative merit of having diffuſed this diſtemper to many parts of the globe. Venereal complaints are at preſent very prevalent here, and they are hitherto acquainted with no other mode of alleviating them than the uſe of decoctions, that purify the blood. The cure by ſalivation, of which they have indeed heard mention made by the Dutch Surgeons, appears to them very difficult to undertake properly, as well as to undergo. They adopted therefore, both with joy and gratitude, the method, which I had the good fortune to be the firſt to teach them, viz. of curing this diſorder with the *Aqua Mercurialis*. Several of the Interpreters made uſe of this method as early as the years 1775 and 1776, and performed with it, under my direction, ſeveral complete cures, both in and out of the town of Nagaſaki. And I pleaſe myſelf with the agreeable hopes, that by means of this eaſier method, in future many thouſand unhappy ſufferers will be preſerved both from fiſtulas in the neck, and other dreadful ſymptoms, attendant on this truly foul diſeaſe; which I very frequently had opportunies of ſeeing, with an equal mixture of grief and horror during my journey into the country.

AGRICULTURE

Is in the higheſt eſteem with the Japaneſe, inſomuch that (the moſt barren and untractable mountains excepted) one ſees here the ſurface of the earth cultivated all over the country, and moſt of the mountains and hills up to their very tops. Neither rewards nor encouragements are neceſſary in a country, where the tillers of the ground are conſidered as the moſt uſeful claſs of citizens, and where they do not groan under various oppreſſions, which in other countries have hindered, and ever muſt hinder the progreſs of Agriculture. The duties paid by the Farmer of his corn in kind are indeed very heavy, but in other reſpects he cultivates his land with greater freedom, than the Lord of a Manor in Sweden. He is not hindered two days together at a time, in conſequence of furniſhing relays of horſes, by which he perhaps earns a groat, and often returns with the loſs of his horſes: he is not dragged from his field and plough to tranſport a deſerter or a priſoner to the next caſtle: nor are his property and his time waſted in making roads, building bridges, alms-houſes, parſonage-houſes and magazines. His days are not conſumed in journies after poles and ſtakes in winter, nor with the almoſt endleſs occupation of fencing in

his grounds, ſunk up to the ancles in mire and clay, in ſpring. He knows nothing of the impediments and inconveniencies, which attend the maintenance and equipment of horſe-and-foot-ſoldiers. And what contributes ſtill more to his happineſs, and leaves ſufficient ſcope for his induſtry in cultivating his land, is this, that he has only one maſter, viz. his feudal Lord, without being under the command of a hoſt of maſters, as with us. No parcelling out of the land forbids him to improve to the beſt advantage the portion he poſſeſſes, and no right of commonage, belonging to many, prevents each from deriving profit from his ſhare. All are bound to cultivate their land, and if a huſbandman cannot annually cultivate a certain portion of his fields, he forfeits them, and another, who can, is at liberty to cultivate them. Thus he is enabled to direct all his thoughts and all his time to the cultivation of his land, an employment, in which he is aſſiſted by his wife and children. Meadows are not to be met with in the whole country; on the contrary, every ſpot of ground is made uſe of either for corn-fields, or elſe for plantations of eſculent-rooted vegetables. So that the land is neither waſted upon extenſive meadows, for the ſupport of cattle and ſaddle-horſes, nor upon large and unprofitable plantations of tobacco,

nor is it ſown with ſeed for any other ſtill leſs neceſſary purpoſe; which is the reaſon that the whole country is very thickly inhabited and populous, and can without difficulty give maintenance to all its innumerable inhabitants.

There is no part of the world, where manure is gathered with greater care than it is here, inſomuch that nothing that can be converted to this uſe is thrown away or loſt. The cattle are fed at home the whole year round, ſo that all their excrements are confined to the farm yards, and it is a very common ſpectacle to ſee old men and children following the horſes that are uſed in travelling, with a ſhell *(Haliotis tuberculata)* faſtened to the end of a ſtick, in order to collect the ordure from off the highways, which is carried home in a baſket. Nay, even urine itſelf, which the Europeans ſo ſeldom turn to the advantage of their fields, is here carefully collected in large earthen pots, which are to be found ſunk in the earth here and there in different parts, not only in the villages, but even beſide the highways. Nor is the Japaneſe more ſcrupulous and exact in collecting every material fit for manure, than his mode of applying it is different from that of other countries. He does not carry out his manure either in winter or in ſummer into his fallow fields, to be dried up there by the ſcorching heat of the ſun, and to

have its nutritive qualities weakened by the evaporation of the volatile ſalts and of its oily particles; but on the other hand, gives himſelf the diſguſting trouble of mixing up manure of various ſorts, the excrements both of man and beaſt, with water and urine, together with every kind of refuſe from the kitchen, till it becomes a perfect hodge-podge; this he carries in two large pails into his field, and with a ladle pours it upon the plant, which has now attained to the height of about ſix inches, and receives the whole benefit of it, at the ſame time that the liquor penetrates immediately to the root. By this mode of manuring, and at the ſame time by the farmer's indefatigable weeding, the fields are ſo completely cleared of weeds, that the moſt ſharp-ſighted Botaniſt would be ſcarcely able to diſcover a ſingle plant of another ſpecies among the corn.

The pains which a farmer takes to cultivate the ſides of even the ſteepeſt hills, is almoſt incredible. If the place be even no more than two feet ſquare, he nevertheleſs raiſes a wall of ſtones at the bottom of the declivity, fills the part above this with earth and manure, and ſows this little plot of ground with rice or eſculent-rooted vegetables. Thouſands of theſe beds adorn moſt of their mountains, and give them

an appearance which excites the greateſt aſtoniſhment in the breaſts of the ſpectators.

Rice is their principal corn. Buck-wheat, Rye, Barley, and Wheat are very little uſed. Among their eſculent-rooted vegetables Batatas *(Convolvulus edulis)* are the moſt abundant, and the moſt palatable. Several ſorts of Beans and Peas are planted in abundance, as likewiſe Alliaceous Plants, Turnips, and Coleworts; from the ſeeds of which laſt they expreſs an oil for their lamps, and whoſe yellow flowers give to whole fields together a moſt beautiful appearance in ſpring.

In the beginning of April, the farmer begins to dig up the land, which he deſigns for the *cultivation of Rice.* It lies at this time almoſt entirely under water, with banks raiſed round the ſides. The furrows are made with a rather crooked hand-bill, about a foot long and a hand broad, faſtened to a handle. The Rice-grain is always ſown firſt, in a plot of ground very cloſe and thick, as Cole-ſeed is in boxes. Afterwards when it is grown up to the height of ſix inches, it is taken up and planted out in a manner ſimilar to Colewort-plants, in the Rice-grounds, ſeveral plants together in tufts, leaving the ſpace of ſix inches between each tuft. This is always the women's work, who wade about in water, that is at leaſt ſix inches deep.

In

In the month of November it is ripe, and is then mown, and, after being bound up in bundles, carried home. The mere ſtriking of the ears againſt a barrel, or any other hard body, cauſes the corn to fall from the ſtalk, ſo that in this reſpect no long and tedious threſhing is neceſſary: but before the huſk can be ſeparated from the pure grain, a ſecond threſhing, or ſtamping, is neceſſary, which is ſeldom ſet about before the grain is wanted to be uſed. Thus it is carried to different places, and ſold there entirely unſtamped. The ſtamping of it in ſmall is performed in the following manner. A block of wood is hollowed out, and this cavity is filled with Rice, which they pound with a wooden peſtle, till it ſeparates from the huſk. In the great, this ſtamping is performed not only by means of a machine, conſiſting of a number of peſtles, which are ſet in motion by a water-wheel; but likewiſe by a ſimilar machine, which a man treads with his foot, and during the ſtamping, ſtirs with a ſtick in the hopper, ſo that the grain can run down. The Rice in this country is accounted the beſt in all the Eaſt-Indies, and is extremely white, glutinous, and more nutritive than any other.

Buck-wheat *(Polygonum fagopyrum)* is moſt commonly uſed when ground to meal, and made into ſmall cakes, which, after being boiled, and

frequently at the ſame time coloured, are baked, and are ſold in the villages and at the baiting-places for a mere trifle, to travellers and their bearers.

Wheat *(Triticum æſtivum et hybernum)* is ſown in the month of November, and cut down ripe in June. It is uſed in general in the form of fine meal; of this they make ſmall cakes, which are eaten in a ſoft ſtate.

Barley *(Hordeum)* is ſown at different ſeaſons of the year, ſometimes in November, ſometimes in December, and at times in the month of October. It is cut down, dried, and threſhed, either towards the latter end of May, or in the beginning of June. The fields in this country often reſemble cabbage-gardens with their beds, which are frequently no more than a foot in breadth, and ſeparated from each other by a deep furrow or trench, which is likewiſe a foot broad. In theſe narrow beds the corn is ſown ſtrait acroſs in rows, which leave an empty ſpace between them. I have ſometimes however ſeen the corn ſown lengthways in the beds, in which caſe there were only two rows. I have likewiſe had an opportunity of obſerving, that when the corn has grown to the height of about a foot, that before it has put forth the ear, the farmer has dug up, as it were, theſe ſmall trenches, and very carefully put earth about the roots, whence the corn has both received ma-

nure

nure and been watered. I was informed, that after a certain ſtated time the trenches are filled up with earth, and what before conſtituted the beds, is converted into trenches. In ſome places likewiſe the corn was found to be blighted, a calamity to which, however, the ſeed is more liable in Europe. As ſoon as the corn is cut down, they frequently ſow another kind of corn or even French Beans, *(Phaſeoli)* between the ſtubble, either acroſs it or in furrows, ſo that the land is actually ſown twice in the year, although upon different places, without freſh carting or other attendance. They uſe this corn chiefly for fodder for their horſes and other animals. It is likewiſe at times ground down to fine flour, of which they make ſmall ſoft cakes.

Cole-ſeed *(Braſſica orientalis)* is cultivated in great abundance in every province. In the month of April, the fields all over the country appear gilt with the flowers of this plant. They make no uſe of the root; but the ſeed, which ripens in May, yields, on being preſſed, an oil, which is uſed every where for lamp-oil. The plant the Japaneſe call *Na Tanne*, and the oil *Natanne Abra*, or *Natanne no Abra*.

Barley, Wheat, and Cole-ſeed are all of them threſhed out at times quite in a plain and artleſs manner, upon ſtraw mats, in the open air, in the villages, and not unfrequently before the

doors of their houſes, with flails, which have three ſwingles. And indeed ſome only beat the ſheaves with the ears of corn againſt a barrel, vat, or the like, which cauſes the corn to drop out: this muſt afterwards be purged from the chaff and other impurities.

Of Beans, Peas, and Lentils, many ſorts are cultivated, both the larger *(Phaſeoli)* and the ſmaller *(Dolichos)*. Of *Daidſu* Beans (Dolichos *Soja)* the meal is uſed for dreſſing victuals, and the expreſſed juice for making Soy; as is likewiſe the whole Bean for the ſoup called *Miſo*, which is a daily diſh with the common people. *Atſuki* Beans likewiſe *(Phaſeolus radiatus)* are ground to meal, of which ſmall cakes are made with ſugar. The common Pea *(Piſum Sativum)* and the broad Bean *(Vicia faba)* I ſaw ſown and made uſe of in ſome places. In like manner divers ſorts of graſs are cultivated, for the ſake of uſing their ſeeds for food both for man and beaſt, as the *Awa (Panicum verticillatum)*, *Kibi (Holcus ſorghum)*, or Millet; *Ko Kibi (Panicum Corvi)*, *Nan ban Kiwi*, *(Cynoſurus Coracanus)* with ſeveral others. Turneps *(Braſſica rapa)* are ſown in abundance, and are much uſed for food, as are likewiſe other eſculent-rooted and bulbous plants, ſuch as Skirrets *(Sium ſiſarum)*, Carrots *(Daucus Carota)*, which here are of a colour very little inclined to yellow; Radiſhes *(Raphanus*

nus ſativus) ; Batatas *(Convolvulus edulis)* ; and, in a trifling quantity, Potatoes *(Solanum tuberoſum)*. In addition to theſe, Lettuces *(Lactuca ſativa)* ; Melons *(Cucumis melo)*, both with white and red pulp, to ſerve by way of deſert at meals, and to refreſh and cool the human body, and quench thirſt in ſummer ; Pumpkins *(Cucurbita pepo)*, which are uſed in ſoups ; Cucumbers *(Cucumis ſativus)* both to be eaten raw, and for pickling ; the Conomon *(Cucumis conomon)*, for pickling and by way of deſert, as likewiſe to excit an appetite ; *Fokke Fokkes*, or the fruit of the *Solanum melongena*, to put into ſoups ; Calabaſſes, or bottle-gourds *(Cucurbita lagenaria)*, are cultivated for flaſks and veſſels of a ſimilar kind. For ſeaſoning are uſed, and ſometimes cultivated, the *Amomum mioga*, a new ſpecies of Ginger ; the Pepper ſhrub *(Fagara piperita)*, of which both the leaves and fruit are taken, to give to ſoups and ſauces a ſtrong ſpicy ſavour ; Cayenne Pepper *(Capſicum)*, Bamboo roots, and various ſorts of muſhrooms *(Agarici)*, which with theſe people are in great requeſt, occur common in the ſhops, dried for ſale, and are beſides in almoſt daily uſe, both for ſoups and ſauces. The deſert at table conſiſts of various well-taſted fruits, which are cultivated in the gardens, ſuch as Lemons, Shadocks, Seville and China oranges ; Pears, Peaches, Plumbs, Cherries, Medlars,

(Meſpilus

(*Meſpilus Japonica*) Figs of a very delicious taſte. (*Dioſpyros Kaki*) Grapes (*Vitis vinifera*), Pomgranates (*Punica granatum*) Spaniſh Figs, (*Cactus ficus,*) Cheſnuts, Walnuts, with a multiplicity of others. Hops (*Humulus*), I ſaw in different parts, growing wild, but not cultivated nor made uſe of.

As every one's land lies open, without being fenced in with hurdles and pales, which are unknown in this country, it is very common to meet with a great number of culinary vegetables and kitchen-garden plants, growing wild in the open fields, and conſequently there are no other gardens, than thoſe which are found near every houſe, are of a very inſignificant ſize, and are chiefly intended for the ſake of ornament. In theſe are to be ſeen both trees, which make a ſplendid figure with their beautiful, large, and frequently double bloſſoms, and other vegetable productions, as well herbs as bulbous plants, adorned with the moſt elegant flowers, ſuch as, for inſtance, the *Azalea Indica*, *Nandina domeſtica*, *Prunus ceraſus*, *Gardenia florida*, *Aucuba Japonica*, the *Spiræa*, *Magnoliæ*, the *Tagetes patula*, *Celoſia criſtata*, *Hovenia dulcis*, *Aſter Chinenſis*, *Pæonia officinalis*, *Chryſanthemum Indicum*, *Calendula officinalis*, *Impatiens balſamina*, *Mirabilis dichotoma*, and an infinite number of others.

For materials for *Dying*, I ſaw them cultivate the *Polygonum Chinenſe*, *barbatum* and *aviculare*;

culare: all of theſe produced a beautiful blue colour, much like that from Indigo. The leaves were firſt dried, then pounded, and made into ſmall cakes, which were ſold in the ſhops. With theſe, I was told, they can dye linen, ſilk, and cotton. When they boil them up for uſe, they add aſhes to them; and the ſtronger the decoction is made, of ſo much the darker blue is the colour obtained; and *vice verſa*.

The *cultivation of Cotton and Silk*, is an object of the greateſt importance in this country, and furniſhes the cloathing of many millions. For this purpoſe they cultivate and plant every year the cotton ſhrub (*Goſſypium herbaceum*), which yields a very fine and white cotton, fit for cloths, wadding, and other uſes. The cultivation of Silk depends upon the planting and propagation of the Mulberry-tree, by means of which an incredible number of Silk-worms are bred, and the raw ſilk is produced, of which are made ſilken ſtuffs, thread, wadding, and a great many more articles, both of ornament and uſe.

The Varniſh-tree (*Rhus vernix*) the Camphor-tree (*Laurus camphora*), the Pine (*Pinus ſylveſtris*), the Tea-tree (*Thea bohea*), the Cedar (*Cupreſſus japonica*), and the Bamboo-cane, or Reed (*Arundo bambos*), do not only grow wild in every part of the country, but are likewiſe cultivated in ſeveral places, on account of the great advantages

vantages which the inhabitants derive from all theſe articles. The Bamboo-reeds ſerve them for water pipes, for levers, for making baſkets and cabinets, for writing pens, fans, &c. Firs ſerve to adorn the courts and places in the vicinity of their houſes, and the wood is uſed for building, as likewiſe in handicraft trades of every kind, even in the fineſt lackered work. Cedars are uſed for naval craft, houſehold furniture, and cabinet-work, in the ſame manner as fir. The *Varniſh-tree* contains a milky juice, which is the beſt of all gums for lackering. The *Camphor-tree* grows wild in great abundance in the neighbourhood of *Satſuma*, and on the *Gotho* iſlands. From this tree is prepared the chief part of the Camphor that is uſed in Europe. The Japaneſe ſplit the wood and roots into very fine pieces, boil it up with water in an iron pot, covered with a wooden lid, which has a deep concavity on the inſide. In this concavity they faſten a piece of ſtraw or hay, ſo that the camphor, when it riſes, may adhere to it. The gum camphor, on being ſeparated from the ſtraw, is in grains, and is packed up in wooden caſks, and ſold to the Dutch Company by weight.

As in the whole of this extenſive empire, there is neither any tallow to be found, nor any butter churned, the inhabitants have turned their attention to ſupply the place of theſe articles, by

by uſing ſweet oils, both for dreſſing victuals, and for burning in the houſe. The ſeeds of the *Rhus ſuccedanea* indeed, yield, on being preſſed, an oil which ſoon congeals to the conſiſtence of tallow, and from which they prepare candles; but theſe are by no means ſo much in uſe as lamps. So they ſometimes likewiſe manufacture candles from the coagulated oil of the *Laurus camphora*, and *glauca*, of the *Rhus vernix*, and the *Melia azedarach*. For burning in lamps again, to light up their rooms in winter, they make uſe of ſeveral ſorts of oil, as for inſtance, that of the *Dryandra cordata*, &c. but eſpecially and moſt commonly the *Braſſica orientalis*. The fine oil of *Seſamum* they uſe in the kitchen, for frying fiſh, and dreſſing other diſhes.

The Sugar-maple does not, to my knowledge, grow in Japan, neither have ſugar-canes been hitherto imported for cultivation; the Japaneſe Interpreters nevertheleſs ſhewed me that they had a juice, from which ſugar may be prepared. This, they informed me, was made from the juice of a certain tree, which grows upon the iſlands that ſurround Japan. It had a ſweet taſte, but was of a browniſh colour, and a diſagreeable aſpect. So that if ſugar be a neceſſary commodity for a country, it ſeems to be the only one, which the Japaneſe need to receive from the hands of foreigners. That beſides, they have,

and

and that in the greateſt abundance, every thing elſe which is needful both for food, cloathing, and the conveniences of life, reſults from that which was ſaid above. And whereas in moſt other countries complaints are made more or leſs frequently about bad harveſts and ſevere famine, ſuch complaints are ſeldom heard in the populous empire of Japan, where the inhabitants live frugally, and without prodigality or diſſipation, and where they providently blend in the ſoil with their different ſpecies of corn, a conſiderable number of leguminous and eſculent-rooted vegetables. Notwithſtanding theſe precautions, however, it ſometimes happens, that even here famine is felt.

As the Japaneſe have ſuch a variety of ſpecies of corn, ſuch a plentiful diverſity both of roots and pulſe, beſides the large ſupply of proviſions, which they fetch from the rich ſtore-houſe of the circumambient ſea, they neither need nor have any conſiderable ſtock-farms. They have few Quadrupeds; for which reaſon there is no occaſion to lay out the land in extenſive meadows. The ſmall number of *horſes* to be met with in this country, is chiefly for the uſe of their Princes: ſome are employed as beaſts of burden, and others ſerve travellers to ride on. Indeed I do not ſuppoſe that the ſum total of all their horſes amounts to the number of thoſe made uſe of in one

one ſingle town in Sweden. Here one neither hears mention made of ſtately chargers, nor of mettleſome coach-horſes, nor of ſwift ſledge-trotters, nor of the Maſters of the Horſe ſo famous in Europe. Of *Oxen* and *Cows* they ſeem to have a ſtill ſmaller number; and they neither make uſe of their fleſh, nor yet of their milk, nor of the cheeſe, butter, and tallow prepared from them: the ſole uſe they make of them is ſometimes for drawing carts, and for ploughing ſuch fields as lie almoſt conſtantly under water. A very few *Swine* are to be ſeen in the vicinity of Nagaſaki; and this miſchievous animal, the moſt hoſtile to agriculture, if not confined, of any, was probably introduced by the Chineſe. *Sheep* and *Goats* are not to be found in the whole country; the latter do much miſchief to a cultivated land, and wool may eaſily be diſpenſed with here, where cotton and ſilk abound. During my ſtay at the Dutch Factory, it happened that ſome Japaneſe arrived at the iſland with ſeveral ſheep, of which they had had the cuſtody for many years, having received them from ſome Chief for the Dutch trade, who ſailed to Batavia, and did not return again. *Dogs*, the only idlers in this country, are kept from ſuperſtitious motives; and *Cats* are in general the favourites of the ladies. *Hens* and common *Ducks* are alſo kept tame in their houſes, chiefly, it is to be preſumed

on

on account of the eggs, of which they are very fond, and make uſe of them on various occaſions, boiled hard, and chopped into ſmall pieces.

THE NATURAL HISTORY OF THE COUNTRY.

WERE we to enter into a minute inveſtigation of the ſubject in its full extent, it would be too voluminous for the narrow limits of a work, which is intended to form merely the Journal of my Travels. The preſent ſketch, therefore, is only deſigned to give ſome faint idea of the different productions of this country in the three grand departments of Nature. As to the vegetables, I have already amply deſcribed them in my *Flora Japonica*, publiſhed in the year 1784; and have at the ſame time indicated the profit and uſe which the Japaneſe in every reſpect know to make of the various ſorts of trees, ſhrubs, and herbs, and their different parts. The animals, which are either rare, or altogether unknown to the Naturaliſts in Europe, I have in part already arranged and deſcribed in various Academical Treatiſes and Diſputations, frequently with the addition of Plates. I am in hopes, in caſe my time

time of life, health, and leiſure will permit, to communicate in the ſame manner the reſidue, which I may ſtill chance to have in my poſſeſſion, and which have hitherto eſcaped divers wayward perſecutions of fate.

The following is a liſt of the Mammalia, which have come within the reach of my obſervation.

Canis *lupus:* the Wolf, called *okame,* in the northern provinces.

Vulpes, the Fox; an animal deteſted throughout the whole country.

Familiaris, the Dog; both in its domeſticated ſtate, and, as I was informed, likewiſe wild, called *Yamma ing,* which, however, was probably confounded with the Jackall, or ſome other ſpecies.

Felis *catus:* Cats are to be found in every houſe, very variable in colour.

Mus *rattus:* the rat domeſticates here, as in other countries.

Lepus *timidus:* the Hare (the grey ſort) was brought not unfrequently to our Factory and to our table.

Bos *taurus:* Buffaloes with a bunch on their backs, I ſaw in the neighbourhood of Miaco, drawing large carts; but the cows, which the country people ſometimes made uſe of in agriculture, were very ſmall.

Equus *caballus:* the Horſe is of a middling ſize.

Sus *ſcrofa:* the Hog is of the Chineſe ſort.

Whales I ſaw in the market and the ſhops in Nagaſaki, cut in pieces, and ſold for food. They are caught upon the coaſt with harpoons; and, beſides their fleſh, their bones are made uſe of, as is likewiſe the ambergriſe which is ſaid to be frequently found in their bowels, and which once even was ſhewn to me quite freſh and in a ſoft ſtate.

Many ſpecies of the Mammalia were indeed mentioned to me, as being found in the northerly and leaſt inhabited tracts of the iſland, ſuch as Harts, Bears, Monkeys, and ſeveral others; which, however, I had not an opportunity of ſeeing alive, nor even their ſkins, when dead.

Of the Bird tribe both the common Cock and Hen and Geeſe occur tame; but a great number live wild in the water, between the iſlands, frequently in incredible quantities, ſecured both from the attacks of thoſe that wantonly fire at them, in order to ſcare them, and of thoſe that purſue them before the due ſeaſon. Others too live high up in the country and in the fields; nevertheleſs I had no opportunity to make any collection of them, as I had not the uſe of any firearms, and could not procure them by any other means. Thoſe that I knew with ſomewhat greater certainty,

certainty, were only the following: the Cock (*Phaſianus gallus*): the Crow, *Corvus corax*, the *Anas anſer, galericulata & querquedula* (the common Gooſe, the Chineſe Teal, and the Garganey), which were brought to our kitchen; the *Ardea alba & major* (the white and common Heron), which followed the ploughman in the field; the *Tetrao coturnix*, or Quail; the *Loxia pyrrhula*, or Bulfinch, and *Oryzivora*; the *Columba oenas*, or common Pigeon. Of the Amphibia, very few are to be met with in this country; thoſe that I ſaw were merely a *Teſtudo japonica*, and a *Lacerta japonica*. The interpreters, indeed, affirmed that Serpents were to be found here, but I had never an opportunity of ſeeing any ſigns of them.

Fiſh, notwithſtanding the extenſive ſpace they occupy in the depth of the ſea, are ſought after with greater diligence by the Japaneſe than any other kind of animal. A great number of theſe I collected, and having preſerved them in ſpirits of wine, I ſent them to Batavia, Holland, and my native country. Misfortunes that happened to them in their way home, have deprived me of a great many of theſe rare animals, and ſome of them are ſtill undetermined. Thoſe among them that are at preſent known are the following: the *Muræna nebuloſa, picta, annulata*, and *faſciata*, together with the *Ophidium cinereus*, all very beautiful and ſingular ſpecies of Eel; the *Gobius*

patella; *Silurus maculatus*, *lineatus*; *Callionymus japonicus*; the *Sciæna cataphracta*; *Perca* 6-*lineata*, and *picta*; *Salmo salar*; *Clupea thriza*; *Fistularia tabacaria*; *Cyprinus aureus*; *Tetraodon hispidus*, and *ocellatus*; *Ostracion cornutus*; *Syngnathus hippocampus*; *Raja torpedo*.

Of the Insects, which were more easy to be procured, as well during the journey to court, as on the island of the factory, some were known, others entirely unknown before, viz. the Anobium *ruficolle*, Coccinella *joponica*, 4-*pustulata*; Chrysomela *æstuans*, *pallida*; Dermestes *violaceus*; Cicindela *japonica*, *catena*; the Scarabæus *æruginosus*, called *Fama Musi*: the Hister *unicolor*; Mordella *nasuta*, *aculeata*; Ptinus *fur*; Meloë *proscarabæus*; Cassida *nobilis*, *vesicularis*; Silpha *æstiva*; Buprestis *rustica*, *ignita*, *vittata*, *elegans*; Cerambyx *rubus*; Lampyris *japonica*, *compressa*; Staphylinus *erythropterus*, *riparius*; Forficula *auricula*; Cimex *grandis*, *guttigerus*, *hispidus*, *clavatus*, *trigonus*, *unipunctatus*, *fullo*, *sordidus*, *chinensis*, *brunneus*, *anchora*, *cornutus*, *niger*, *andreæ*, *colon*, *augur*, *ocellatus*; Blatta *orientalis*, *germanica*, *gigantea*; Mantis *religiosa*, *maculata*, *nasuta*; Gryllus *nasutus*; Acheta *gryllotalpa*; Papilio *argiolus*, *rapæ*, *Calbum*, *thrax*, *hecabe*, *proteus*, *ascanius*, *phlæas*, *cardui*, *niphe*; Sphinx *atropos*; Bombyx *lubricipeda*; Noctua *serici*, *chi*, *paranympha*; Phalæna *nymphæata*, *prunata*, *immutata*,

mutata, *amatoria*; Pyralis *ocellaris*; Tortrix *viridana*; Hemerobius *perla*, *grandis*; Agrion *puella*, *virgo*; Panorpa *japonica*; Apis *mellifica*; Veſpa *parietum*; Muſca *carnaria*, *japonica*, *albifrons*, *cæſar*, *mellina*, *vibrans*, *domeſtica*, *fimetaria*, *cyniſiea*, *pluvialis*; Stomoxys *calcitrans*; Tipula *phalænoides*, *ruficollis*, *femorata*; Culex *pipiens*; Oniſcus *oceanicus*, *aſellus*; Monoculus *polyphemus*; Pulex *irritans*; Pediculus *humanus*; Julus *terreſtris*; Lepiſma *ſaccharina*; Cancer *diogenes*, *aſtacus* and *dorſipes*.

Shells were collected by the Japaneſe, eſpecially in the more northerly diſtricts, were laid upon carded cotton, faſtened to it with rice-glue, and ſold to the Dutch that went on the journey to court. Theſe ſhell-fiſh were all very elegant, but the ſmaller ſpecimens were always ſelected for this purpoſe. Thoſe which were uſed more commonly in the country for food, and were ſometimes even brought to our table, were the Oſtrea *pleuronectes* and *gigas*, a very long and thick ſpecies of Oyſter, together with the Venus *chione* and *meretrix*, which were either boiled or ſtewed. Of Worms, Shells, and Corals, I collected the following: the Sepia *octopodia*, *ſepiola*; Aſterias *rubens*; Lepas *mitella*, *balanoides*; Mya *truncata* (*foſſil*;) Solen *vagina*, *legumen*, *bullatus*, *ſtrigilatus*; Tellina *ſolidula*, *delicatula*, *lactea*, *albida*; Donax *ſcripta*, *irus*; Cardium *ruſticum*; Venus

86241

virginea, decuſſata, læta, deflorata, tigerina, rotundata, cancellata, verrucoſa, pectinata, exoleta, together with *chione*, which is called *hamagai* and *meretrix*, which bears the name of *Sigakf.* The Mactra *violacea, glabrata, ſolida, lutaria, ſtultorum*; Arca *antiquata, undata, pella, barbata, noæ*; Spondylus *gæderopus*; Chama *antiquata, lazarus*; Mytilus *hirundo, barbatus, bilocularis, margaritiferus*; Oſtrea *lima, pellucens, plica, maxima, folium, fornicata, pleuronectes,* and *gigas*; Anomia *hyſterophorus, terebratula, plicatella, lacunoſa, cepa*; Pinna *nobilis*; Argonauta *argo*; Conus *ſpectrum*; Cypræa *mauritanica, ſerpentis*; Voluta *mercatoria*; Buccinum *galea, ſpiratum, nitidulum, lapillus*; Bulla *naucum, ampluſtre, ampulla, phyſis, ſpelta*; Murex *tritonis, aluco, ſaxatilis, antiquus*; Strombus *lubuanus*; Trochus *conulus, veſtiarius, pharaonis*; Turbo *bidens, ungulinus*; Nerita *canrena*; Haliotis *tuberculata*; Patella *ungarica, ſaccharina, unguis, nubecula, barbara, cærulea*; Serpula *arenaria, triquetra, ſpirorbis*; Madrepora *porpita* petrefied; Iſis *entrocha*; Tubipora *muſicalis*, which is called *iwa kik* and *teredo*; Umbilici *veneris* were found caſt up on the ſhore, in like manner as *Belemnites* were found on the mountains.

That the precious metals, *Gold* and *Silver*, are to be found in abundance in the empire of Japan, has

has been well known, both to the Portugueſe, who formerly exported whole ſhip-loads of them, and to the Dutch, in former times. *Gold* is found in ſeveral parts; and perhaps Japan may in this reſpect conteſt the palm with the richeſt country in the world: but, in order that this metal may not loſe its value by becoming too plentiful, it is prohibited to dig more than a certain ſtated quantity; not to mention that no metallic mine, of any kind whatever, can be opened and wrought without the Emperor's expreſs permiſſion. When this permiſſion is obtained, two-thirds of the produce are the portion of the Emperor, and the proprietor of the land receives one-third for his expences. Gold is found in ſmall quantities in the ſand; but the chief part is extracted from cupreous pyrites, diſſolved by brimſtone. The fineſt gold, together with the richeſt gold-mine, I was told, are found on the largeſt of the Nipon Iſlands, near *Sado*. The next in quality, to this is that which is found in *Surunga*. Beſides theſe places, it is known for a certainty, that ſeveral rich gold-mines are to be found in *Satſuma*, as likewiſe in *Tſikungo*, and in the iſland of *Amakuſa*. It is uſed for the Mint, gilding, and embroidery; but is not carried out of the country.

Silver muſt formerly have been found in much greater plenty than at preſent, as a large quan-

tity of it was then exported from this country. The Japaneſe conſider it as being much more rare than gold, although the latter metal is dearer. They now likewiſe received in barter a conſiderable ſum of Dutch Ducatoons, from the Dutch Company. It is ſaid to be found in the province of *Bingo*; and in the more northerly parts towards *Kattami*, as I was informed, very rich ſilver-mines are to be met with. Independently of theſe places, the two iſlands, which are called the Gold and Silver Iſles (*Ginſima*, *Kinſima*) are ſaid to contain a great quantity of both of theſe precious metals. Silver is uſed for coining and for plating.

Copper is quite common in every part of the empire, and is richly impregnated with gold, conſtituting the main ſource of the wealth of many provinces. It was not only formerly exported in amazing quantities, but ſtill continues to be exported both by the Dutch and Chineſe Merchants. The fineſt and moſt malleable is dug in *Suruga*, *Atſingo*, *Kyno Kuni*. The laſt ſort is eſteemed to be the moſt malleable of any, whilſt that from *Suruga* contains the greateſt quantity of gold. A great number of copper-mines are to be found in Satſuma and at other places. Of this metal are made ſmall pieces of money for change; it is uſed likewiſe for plating, for making utenſils of Sowas, for pots, kettles, &c.

Iron

Iron ſeems to be ſcarcer than any other metal in this country. It is found, however, in the provinces of *Mimaſaka*, *Bitsju*, and *Biſen*. This they are neither fond of importing, nor yet of exporting it for ſale. Of it they manufacture ſcymitars, arms, ſciſſors, knives, and various other implements, of which they ſtand in need.

Of *Amber* I had a preſent made me by my friends: they called it *Nambu*. It was of a dark as well as of a light yellow colour, and likewiſe ſtreaky. I was told alſo that it is found in this country.

Brimſtone is found in great abundance in Japan, eſpecially upon a certain iſland, near Satſuma. *Pit-Coal*, I was informed, is likewiſe to be met with in the northern provinces. *Red Agate*, with white veins, I ſaw ſeveral times made uſe of for the buttons, &c. of tobacco pouches, and medicine cheſts, which Agate was moſt frequently cut in the ſhape of a butter-fly, or ſome other animal.

COMMERCE

Is carried on either within the empire itſelf, between its different towns and harbours, or elſe with foreigners. Their inland trade is in a very flouriſhing

flouriſhing ſtate, and in every reſpect free and uncontrouled, being exempted from impoſts, and having no want of communication between the various and innumerable places of the empire. The harbours are ſeen covered with large and ſmall craft, the high roads are crouded with travellers, and wares that are tranſporting from one place to another, and the ſhops are every where filled with goods from every part of the empire, eſpecially in the principal trading towns. In theſe towns, and particularly in Miaco, which is ſituated in the centre of the empire, are kept likewiſe ſeveral large fairs, to which a vaſt concourſe of people reſort from each extremity of the land, to buy and ſell. If we except KUBO, the merchant is, it is true, the only one in the whole country, who can become rich, and ſometimes accumulate very conſiderable ſums. But, notwithſtanding his wealth, he cannot here, as in other countries, either purchaſe great titles, or raiſe himſelf to a higher rank in life; on the contrary, a merchant is always deſpiſed, and the public at large entertain the moſt contemptible opinion of him, inaſmuch as they look upon it, that he has amaſſed his treaſures in a diſhonourable way, and not without doing an injury to his fellow-citizens. In caſting their accounts, they always make uſe of Decimals. For weighing they uſe a ſteelyard, to which they faſten a ſcale, wherein they place their

wares,

wares. Upon this ſteelyard is hung, by means of a ſtring, a weight, which can be puſhed backwards or forwards to aſcertain the weight of the commodity. Such ſmall ſteelyards the merchants always carry about them, either ſingle or elſe in a box, together with a computing board. The *Tea Trade* is confined entirely to the inland conſumption, the quantity exported amounting to little or nothing. The traffic in *Soy*, on the other hand, is more conſiderable; and as the tea produced in this country is reckoned inferior to that of China, ſo the ſoy is much better than that which is brewed in China. For this reaſon ſoy is not only exported to Batavia, in the wooden barrels in which it is made, but is likewiſe ſold from thence to Europe and to every part of the Eaſt-Indies. In ſome places of Japan too the ſoy is reckoned ſtill better than in others; but, in order to preſerve the very beſt ſort, and prevent its undergoing a fermentation, in conſequence of the heat of the climate, and thus being totally ſpoiled, the Dutch at the Factory boil it up in iron kettles, and afterwards draw it off into bottles, which are then well corked and ſealed. This mode of treatment renders it ſtronger and preſerves it better, and makes it ſerviceable for all kinds of ſauce. The *Silk trade* is indeed in a very flouriſhing ſtate in the empire; but their manufactured ſilk cloths, on account of

their ſlightneſs, cannot be exported and uſed by the Europeans. The home trade in *Porcellain* is very briſk; but the exports are very few; as the Japaneſe Porcellain, though very good with reſpect to the materials, is thick and clumſy, and very ſeldom well coloured, and in general is far inferior in beauty to the Chineſe.

The trade with China has probably been carried on longer than with any other nation; it is likewiſe the only Indian nation, with which they continue to have any dealings. From the remoteſt times the Chineſe traded in raw ſilk, which they imported; they firſt landed at Oſacca, and afterwards at the harbour of Nagaſaki, where they ſtill continue to anchor, and have a Factory, together with a Temple, and their own Prieſts. Till the year 1684, there arrived annually two hundred veſſels, each equipped with fifty men: but on its being diſcovered that the Jeſuits, who at that time ſtood in high favour with the Chineſe Emperor, had, through the medium of ſome merchants, ſmuggled into Japan ſeveral Catholic books, originally printed in China; the Chineſe were in conſequence of this more reſtricted than formerly, and their capital in trade, which before was diſcretional, was fixed at 600,000 thayls, and the number of their ſhips reduced to ſeventy, equipped with only thirty men each. At preſent they are confined to a ſmall iſland oppoſite the

town

town of Nagaſaki: they ſend no Ambaſſador to the Emperor; they have no Purveyor, but barter their own proviſions themſelves at the gate; they have likewiſe no Director over their Commerce; but Interpreters, a Guard, and Superviſors are appointed to attend them, the ſame as the Dutch. They vend their wares at three different ſeaſons of the year, viz. Spring, Summer, and Autumn. They ſell here raw Silk, and manufactured ſilken Stuffs, Sugar, Turpentine, Myrrh, Agate, Calumbak, Baros Camphor, Ninſi, Medical Books, and other articles appertaining to medicine: in exchange for which they take Copper in bars, lackered ware, &c. Many, who are fond of pork, bring with them ſwine from China. When a ſhip of theirs has taken in its lading, and ſet ſail, it is followed to a conſiderable diſtance at ſea by a Japaneſe veſſel, in order to prevent ſmuggling on the coaſt.

The Portugueſe, who firſt diſcovered the iſlands of Japan, were likewiſe the firſt European nation that carried on any trade in theſe parts. The profits were in the beginning incredible, inſomuch that annually upwards of 300 tuns of gold were exported from hence. Afterwards, when they had rendered themſelves deteſted by their haughty conduct, and their trade in conſequence of this had fallen off amazingly, yet ſtill they continued to export Anno 1636, 2350 cheſts

of

of ſilver, or 2,350,000 thayls. Anno 1637, they exported 2,142,365 thayls, and in the year 1638, 1,259,023 thayls. After the Portugueſe had been expelled from the land, they, as well as the Spaniards, made ſeveral attempts to re-eſtabliſh their trade; but every attempt not only miſcarried, but was attended with the moſt diſagreeable conſequences among a people ſo inflexible in their reſolves as the Japaneſe. Anno 1640, a ſhip was ſent from Macao, having on board two Ambaſſadors, with a retinue of ſeventy-three perſons. Theſe were all of them immediately made priſoners in Nagaſaki, and their arrival ſignified to the court; upon which they were all, excepting twelve, who had previouſly ſet out on their return, ſentenced to be put to death, and were all of them beheaded upon one and the ſame day, and even in one and the ſame moment, each by a ſeparate executioner. At the ſame time the prohibition was renewed for this nation ever to come to Japan; and this prohibition contains the following no leſs arrogant than ſtrange menace, that ſhould even the King of Portugal himſelf, or the God of the Chriſtians arrive there, they ſhould undergo the ſame fate.

A large Spaniſh three-decker, well-manned, and mounting a conſiderable number of guns, was audacious enough to anchor in the harbour of Nagaſaki, and experienced a ſtill more lamentable

mentable fate; which proves how inflexible the Japaneſe are in their determinations, how pertinaciouſly they execute the ſtatutes of their laws and ſupreme magiſtrate, and do not even ſuffer themſelves to be deterred by the formidable cannon and artillery of Europe. The ſhip alluded to came from the Manillies, unloaded their cargo in Nagaſaki, and took in a heavy lading of ſilver and other commodities. Meanwhile intelligence of their arrival had been ſent to court, upon which the Prince of Arima received orders to burn the ſhip, together with its crew and merchandiſe. Accordingly the Prince attacked the ſhip, in ſpite of the moſt valiant reſiſtance. As ſoon as he had boarded the ſhip with his forces, the Spaniards retreated under their uppermoſt deck. The Prince retired in time to ſave himſelf, and the deck was blown up into the air. The Spaniards were attacked with equal bravery a ſecond, and after that a third time, till all their decks were blown up, when the ſhip went to the bottom, and not a ſingle man was ſaved. Upwards of 3000 of the Japaneſe periſhed in this attack, and the conteſt laſted nearly ſix hours. More than 300 cheſts of ſilver have been ſince got up at different times.

The Dutch trade has experienced many viciſſitudes, and has ever, one time after another, both been

been diminiſhed, and rendered leſs profitable. As the Portugueſe could not by the influence which they had at firſt acquired, prevent the Dutch from trading here likewiſe, the latter eſtabliſhed a Factory upon an iſland near the town of *Firando*, which they were in the ſequel compelled to abandon. In the reign of the Emperor IYEYAS, Anno 1601, the Dutch firſt obtained the Royal permiſſion to carry on a trade in any part of Japan, a trade, which flouriſhed till the year 1618, when they had the imprudence to requeſt the renewal of this charter from the ſucceeding Emperor FIDETADA. Since this period their profits were greatly reduced, and their privileges in many reſpects retrenched. Anno 1638, they received orders to demoliſh their warehouſe at *Firando*, which was built of ſtone, with great ſtrength as well as magnificence, and had the letters A: o C. inſcribed over the door; a circumſtance which could not fail of alarming a people ſo extremely miſtruſtful, and ſo ill-treated by the Portugueſe. Shortly after this tranſaction, they received orders to abandon *Firando* entirely, and to remove to Nagaſaki, and in future to caſt anchor only in this harbour, which is ſituated at the very extremity of the empire. Here they were ſubjected to the ſtricteſt inſpection; the rudders being at firſt taken off from the ſhips, the powder, balls, cannon, and arms carried into the country, and the

the ſhip unladen by the Japaneſe themſelves; but ſome of theſe precautions have been ſince gradually omitted.

At firſt the Dutch imported raw Silk, manufactured Silk-ſtuffs, and Half-ſilks, Chintzes, Cottons, Clothes, Sappan-wood, Brazil-wood, Buffaloes-hides, Wax, Buffaloes-horns, Ivory, Sea-green, Spaniſh Leather, Pepper, Sugar, Cloves, Nutmegs, Baros Camphor, Quickſilver, Saffron, Lead, Saltpetre, Borax, Alum, Muſk, Gum Lac, Benzoe, Storax, Catechu, Ambergris, Coſtus Arabicus, Coral, Antimony, Looking-glaſſes, Lignum Colubrinum, Files, Needles, Glaſs, Spectacles, Birds, and other curioſities. The profits of this trade were very conſiderable at Firando; when, on the loweſt calculation, ſix millions of gilders were exported, and in ſilver alone upwards of four millions. At the requeſt of the Dutch themſelves, the ſilver trade was afterwards exchanged for that of copper, the profits upon the latter being at that time the moſt conſiderable: but from that period likewiſe the exportation of ſilver has been ſtrictly forbidden. The worſt blow, perhaps, which the Dutch trade has received, was in the year 1672, in conſequence of the enmity which the Privy-Counſellor INABA MINO, a favourite of the pious Emperor DAIJOJIN, had conceived againſt the Dutch. This hatred he

gratified by means of one of his relations, who was appointed Governor in Nagaſaki. This man ordered ſamples to be ſent him of every kind of wares, which were that year brought in the Company's ſhips to Nagaſaki. Theſe ſamples he ſhewed to the merchants, and informed himſelf of the price ſet upon them, as well as of the quantity which they wiſh to have. Upon this he proffered the Dutch leſs for theſe commodities, and left it at their option to export them in caſe they did not find it anſwer to them. According to this valuation, the price of commodities was reduced every year, and the kobangs, or Japaneſe currency, roſe in value. This conduct, it is true, gave birth to complaints, and the Dutch trade was ſo far free and uncontrolled, that their wares were permitted to be ſold by public auction; but the whole amount of their ſale was limited in the year 1685, to 300,000 thayls. At preſent the company employs only two ſhips, and its profits are very inconſiderable. The commodities, which are now in general imported and exported by it, have been already ſpecified by me in the Third Volume of this work.

The Coins current in this country, I have likewiſe already deſcribed in part in the Third Volume; as for inſtance, new *Kobangs*, *Itjibs*, *Nandiogin*, *Itaganne*, and *Kodama*, *Seni*, old *Ko-*

bangs,

bangs, old *Itjibs*, *Kosju Kin*, and *Gomome Gin*. The Japaneſe coins in general are very ſimple, ſtruck plain and unadorned, and the greater part of them without any rim round the margin, and without that decoration which the Swediſh coins poſſeſs, and moſt of them without any determined value. For this reaſon they are almoſt always weighed by the Merchants, who, at the ſame time, likewiſe ſet a mark upon them, to ſignify that the coin is ſtandard weight and unadulterated. The *Obang* is the largeſt gold coin that is to be found in the whole country, and ought rather to be conſidered as a medal, than as a piece of money. It is not current in trade, and is ſeldom to be met with among merchants or perſons in private life. It is a flat, oblong plate of gold, rounded off at the four corners, nearly of the thickneſs of a farthing, and is ſtampt on one ſide with fine lines, going tranſverſely acroſs the dye, but broken off at intervals, and four impreſſions within the margins of the four ſides, each impreſſion exhibiting Dairi's arms. On the other ſide, which is plain and ſmooth, are inſcribed, in the name of the Prince who iſſues the coin, ſeveral large black letters, reaching from ſomewhat above the middle down to the lower margin. This inſcription aſſures the proprietor of the genuineneſs of the coin, and there-

fore, as ſoon as it is worn off, the ſame Prince's ſecretary is bound to renew it, for which an Itjib muſt at that time be paid. Such a gold coin is, of the value of ten old Kobangs. So that the *Obang* is chiefly in the poſſeſſion of, and iſſued out by the Princes of the country and the Privy Counſellors, who preſent one of theſe pieces to thoſe who are in their good graces when they have no other fit preſent at hand. It is then given by way of doing honour to the perſon to whom it is preſented, ſince they conſider it leſs honourable to beſtow in a preſent, though to the ſame amount, the common kind of Kobangs.

Among their Silver coins the *Kodama* is the moſt variable, as well with reſpect to its ſhape and ſize, as to the impreſſion which is ſtamped upon it. Of this coin there are ſome that are oblong, while others are circular, or ſpherical, or convex, or flat. Sometimes they are ſtamped with more and ſometimes fewer letters, and at other times with the image of Daikokf. By *Daikokf* is meant the God of Riches, or the Merchant's God, in this country. He is repreſented ſitting upon two barrels of rice, with a hammer in his right hand, and a ſack at his left. The Japaneſe believe him to be inveſted with the power of producing, on any ſpot which he ſtrikes with his hammer,

hammer, whatever he pleaſes; as for inſtance, rice, food, clothes, money, &c.

Seni, of copper or iron, are ſtrung, a hundred at a time, or, as is moſt commonly the caſe, ninety-ſix, upon a ruſh. The former are then called *Metaſijakf*, and the latter *Kwurok-kuſjakf*. A ſtring of the latter conſtitutes the value of one [illegible], five *Konderins*. The coins in one of theſe [illegible] are ſeldom all of one ſort; but generally conſiſt of two, three, or more different kinds. In this caſe the larger *Seni* are ſtrung on firſt at one end of the ruſh, and then follow the ſmaller; the number of *Seni* diminiſhing in proportion to the number of large pieces in the parcel, which are of greater value than the ſmall ones. Such parcels of *Seni* often lie ready ſtrung in their ſhops, both in town and country, for the accommodation of travellers, who are thus enabled to exchange their ſmall coin expeditiouſly, without having occaſion to loſe any time in reckoning it up. In the town of Nagaſaki, Chineſe farthings are likewiſe current in trade: theſe are diſtinguiſhed by their yellow colour. They reſemble the Japaneſe *Seni* in every reſpect, except in the colour of the metal, and the inſcription.

RESIDENCE AT DEZIMA, PREVIOUS TO MY RETURN HOME.

AFTER my arrival at the Factory, from the Court, I ſpent a very hot ſummer, and was very buſily employed in reviewing and arranging the different collections which I had made in the courſe of my journey, as well of dried and preſerved, as of curious live trees and ſhrubs, which I intended to ſend to Amſterdam, by the homeward-bound ſhips from Batavia. Theſe were in particular ſeveral very beautiful ſpecies of the Maple genus (*Aceres*), beſides others appertaining to thoſe of *Lycium*, *Celaſtrus*, *Viburnum*, *Prunus*, *Cycas*, *Cypreſſus*, *Citrus*, &c.

I made likewiſe at this time ſeveral excurſions in the vicinity of Nagaſaki; and as this was the ſeaſon of the year moſt productive of flowers, I had the pleaſure to ſee my heavy expences, in this reſpect, ſomewhat better repaid, than in the preceding autumn and winter.

Inſtead of hemp, I ſaw white nettles (*Urtica nivea*, which likewiſe grew very commonly wild), cultivated in ſome places for the manufacturing of ropes and cloths.

The *Ricinus* I found planted in ſeveral places, the ſeeds of which being pounded with Moxa and Touche together, are put into a box, over which

which a piece of ſilk is ſtretched, which is beſmeared with oil, in order that the powder contained underneath may be moiſtened by it. Whenever a Japaneſe has occaſion to put his ſeal to any thing, which is often very curiouſly wrought in horn, he firſt dips the ſeal into this box, and then impreſſes it upon the writing that is to be deſignated by it. Thus this powder ſupplies the place of Printer's Ink, and it is therefore neceſſary that the ſilk which covers the box, ſhould always be moiſtened afreſh with oil, as faſt as it dries.

The mats, with which the floors in general throughout the whole empire are covered, are moſtly plaited in the country, and are of different quality in different provinces. The better ſort is manufactured from the *Juncus effuſus*, which is plaited very cloſe and neatly together, and the interſtices are afterwards filled up with rice-ſtraw to the thickneſs of two or three fingers. In order therefore that this ſpecies of graſs may grow to a greater height and be more ſerviceable, it is cultivated in ſome places which lie low; and for the purpoſe of giving the mats a whitiſh, rather than a yellow colour, it is very common to lay the ruſhes out to bleach.

The *Lilium ſuperbum*, which is one of the moſt beautiful flowers in the world, I frequently

ſaw hung up in their ſmall veſſels in the harbours, as an offering to their Sea God.

The *Uvaria Japonica* is a ſmall ſhrub, which creeps along the ground, and grows very plentifully in ſeveral places round the harbour of Nagaſaki. It is remarkable on account of the great quantity of clear mucus which it contains. When the twigs are deprived of the outſide bark, and placed in a glaſs of water, the mucus exſuding, expands itſelf round them for about the thickneſs of a line and upwards, and appears as clear as chryſtal. This mucus is ſometimes uſed for the manufacturing of paper, inſtead of that which they extract from the *Hibiſcus manihat*, and the ladies likewiſe uſe it to render their hair ſmooth and gloſſy.

The *Camellia ſaſanqua* grows very plentifully near Nagaſaki. It is a little ſhrub, ſo exactly reſembling the Tea-tree, both in its leaves and flowers, that it is difficult to diſtinguiſh them from each other, except by their ſize. The leaves have rather a pleaſing ſcent, and are therefore uſed by the fair ſex, after being boiled, to waſh their hair. They are likewiſe ſometimes mixed with Tea-leaves, to render the ſcent of theſe ſtill more agreeable.

A very ſmall ſpecies of China Orange (*Citrus Japonica*), is frequently cultivated in the houſes in pots. This ſhrub hardly exceeds ſix inches in height,

height, and its fruit, which is ſweet and palateable, like China Oranges, is not larger than an ordinary Cherry.

Truffles *(Lycoperdon tuber)*, are dug out of the ground in many places, of the ſize of a plumb: when freſh dug, they are ſoft, and rather of a brown colour; but when ſalted they turn black. I frequently ſaw the Japaneſe eat them, after they had been ſalted, in ſoups, in the ſame manner as Morils.

Soy-ſauce, which is every where and every day uſed throughout the whole empire, I might almoſt ſay in every diſh, and which begins even to be made uſe of in Europe, is prepared from Soy Beans *(Dolichos Soja)* and ſalt, mixed with barley or wheat. For this purpoſe they cultivate this ſpecies of bean in ſeveral places, although it grows in great plenty wild. Scarcely any kind of legumen is more copiouſly uſed than this. The ſeeds are ſerved up in ſoups, once or twice a day all the year round, to people of diſtinction or otherwiſe, to the poor and to the rich. *Soy* is prepared in the following manner: the beans are boiled till they become rather ſoft; afterwards an equal quantity of pounded barley or wheat is added. Theſe ingredients being mixed together, are ſet in a warm place, and covered up for four and twenty hours, that they may ferment. An equal quantity of ſalt

is

is then added to the mixture, and twice and a half as much water is poured upon it. After it has been mixed in this manner in an earthen veſſel, it muſt ſtand well covered two or three whole months together, during which period it is neceſſary however at firſt for it to be ſtirred about ſeveral times in the day for ſeveral days together. The liquor is then preſſed out, ſtrained off, and kept in wooden veſſels. Some provinces furniſh better ſoy than others; but excluſively of this, it grows better and clearer through age. Its colour is invariably brown, and its chief excellence conſiſts in the agreeable ſalt taſte which it poſſeſſes.

Myrica nagi is but rarely found at Nagaſaki; the wood is quite white, and is uſed for making combs for the ladies to wear in their hair.

The Fir-tree (*Pinus ſylveſtris*), is that of which the wood is moſt commonly uſed by the cabinet-makers in their work-ſhops: but the wood of the Japaneſe Cypreſs (*Cypreſſus japonica*), which is both ſoft and beautiful, is likewiſe very much uſed, as is alſo that of the *Taxus Macrophylla*, and ſeveral other ſorts.

The *Arum eſculentum* is cultivated in ſmall beds in the fields, not only on account of its eſculent roots, though theſe, unleſs prepared, are very acrid, but alſo on account of its ſtalks, which they cut in pieces and put into their ſoups.

In like manner they uſe for food the roots of the following plants, which grow wild, viz. the *Sagittaria ſagittata*, *Polygonum multiflorum*, and *Dioſcorea Japonica*, the two latter of which ſerve as fodder for the cattle, and were very frequently brought, together with other graſs, to the cattle at the Dutch Factory.

One of the Interpreters, a friend of mine, of the name of KOSAK, often did me the favour to collect for me ſeveral different kinds of coin, which were ſaid to be very ancient, and to have been formerly current in the land. Theſe were preſented to me as great curioſities. They were all of them *Seni* of red copper, and reſembled the others in ſize, thickneſs, and the ſquare hole in the middle; but they were marked with different letters.

One of them was reputed to be 1135 years old, and to have furniſhed the ſtandard for the meaſure of the country; as the diameter of this coin was required to be juſt one Japaneſe inch. It had no letters on the other ſide.

Another was reported to be 758 years old, without any characters upon the other ſide.

The third, 748 years old, was likewiſe without any characters on one ſide.

The fourth, 718 years old, without any letters on one ſide, like the foregoing.

The fifth, 651 years old, without any letters on the other ſide.

The

The ſixth, 596 years old, without any inſcription on one ſide.

The ſeventh, I was informed, was 566 years old; it had two letters on the under ſide. The ages of all theſe coins are reckoned only down to the year 1776, when I received them, each with its age ſet down ſeparate, and folded up in paper. All theſe, together with the Japaneſe coins above deſcribed, are to be found in the Swediſh Majeſty's very valuable Collection of Coins, at Drotningholm.

A blackiſh coloured *Cicada* was called *Semi* by the Japaneſe, and a *Bombylius* with a white tail, had the name of *Abu*.

July 31, 1776, the *Zeedwyn*, a ſhip belonging to the Dutch Company, arrived from Batavia; and on the 2d of *Auguſt* following, the Admiral's ſhip *Staveniſſe*, having on board M. DUURKOOP, who was ro reſide here this year in quality of Chief of the Factory.

Auguſt 26th, in the evening, the Japaneſe began to celebrate in Nagaſaki, and throughout the whole empire, the Feaſt of Lamps, or Lanthorn-feſtival, which is kept with great ſolemnity in Nagaſaki.

September 13th, towards evening, intelligence was brought, that the Prince of *Owari*, Couſin-german to KUBO, had died five days before. On account of this event, orders were now given out,

d, that no perſon whatever ſhould play upon
ny kind of inſtrument for the ſpace of five days,
hich in this country is the ordinary time of the
eepeſt mourning. This Prince was about
rty years of age, or rather more. For ſome
me previous to this, he had been made choice
for the Emperor's ſon-in-law; but his ill
ars had decreed, that the day before his arrival
Jedo, his intended bride had paid the laſt
bt of nature.

When copper is weighed for exportation, it is
ways done with a large Dutch weighing-ma-
hine. In each cheſt a pickel is put, and on
ach pickel the additional weight of a catje is
llowed, of which the Adminiſtrators at Onruſt,
n Batavia, to whom the copper is conſigned,
eceive a fifth part. Of the remaining four-
fths, the ſhip's Captain receives two-thirds,
nd the firſt Mate one-third, in order that thoſe
who are reſponſible for the weight, may not be
ofers. However, notwithſtanding this precau-
ion, it happens every year, that in carrying the
heſts of copper to the bridge, the Japaneſe
ontrive to ſteal ſome of it, ſo that thoſe who
re concerned in them, always loſe ſomething.
They do not regard it as a crime to rob the
Dutch Merchants in this manner; and the
olen copper is afterwards ſold to the Chineſe,
ho pay a greater price for it than the Dutch
would.

would. The preceding year the Captain v
fifty-two pickels too ſhort.

Several of the crew in the Dutch ſhips, w
had been attacked very ſeverely with the fe
in Batavia, ſpeedily recovered their health her
and others, who had large indurated tumors
different parts of their bodies, and a ſwelled a
domen, which is a very common conſequence
the malignant Batavian fevers, were here p
fectly freed from them.

Unicorns teeth *(unicornu)* were ſold this ye
at a much lower price than the preceding.
maas of it fetched this year only four ma
eight konderyns, and five kaſjes, which amoun
to about ſeventy-eight thayls for each catje.

October 10th, the newly-arrived Governor r
viewed firſt of all the Imperial guard in the ha
bour, after which he paid a viſit to the Dut
Admiral-ſhip, and laſtly proceeded to the iſlan
of Dezima, accompanied by the Governor, wh
was now going out of office.

The following gentlemen were Governors
Nagaſaki during my abode there. Anno 177
NOTO *no Kami* went out of office, and was ſu
ceeded by NAGATO *no Kami*: who in his tu
reſigned the reins of government in the ye
1776 to his ſucceſſor TANGO *no Kami*.

Of the Fiſhermen who, from the harbour
Nagaſaki alone, go forth to ſeek their livelihoo
upo

on the deep, and who may be ſeen by their ghted torches, at the diſtance of four miles or more from the town, the number is almoſt incredible. The multiplicity of fires which were ly ſeen at this diſtance, preſented to the ſpectator, in the dark autumnal evenings, the moſt rious ſight imaginable.

Among other commodities, which private perſons exported on their own account, there was likewiſe this year a parcel of iron carried out by one of the Captains, probably with a view of ſelling it to ſome profit to the Chineſe in Batavia.

As I foreſaw, that were I to prolong my ſtay in this country to another year, I ſhould ſtill be able to contribute little or nothing more to the advancement of the ſciences than I had already done this year, I formed a firm reſolution to return to Batavia. On the other hand, our new Chief endeavoured at firſt to perſuade, and at laſt to compel me, to continue here another year, with a view to his own advantage, as he placed greater confidence in my medical talents, than he expected he ſhould have reaſon to do in thoſe of my ſucceſſor. I was, however, fortunate enough to eſcape from him, and to revisit thoſe places, where I could have greater liberty and a wider extent of country, to collect and examine without control the wonderous treaſures of nature.

November

November 23d, I bade farewell to the iſland Dezima, and ſailed to the Admiral's ſhip *L veniſſe*, which rode at anchor off Papenberg.

On the 29th following, Commiſſaries from t Factory came on board, to deliver letters other documents to the Government in Batav

On the 30th in the morning we weighed firſt anchor, although we ſtill ſtaid there a coup of days.

December the 3d, about ten o'clock, v weighed our other anchor, and got under ſa The *Zeeduyn* ſailed a-head of us, and fired h guns, as we did ours, at eleven o'clock, dire before Papenberg, and again at twelve, a laſt ridge of mountains called *Cavallos*, at ſame time reciprocally wiſhing each othe proſperous voyage.

The lading in each ſhip conſiſted now chiefl of 6750 pickels of bar-copper, and 364 barrel of camphor, each barrel containing from 12 to 130 pounds weight.

ARRIVAL IN BATAVIA.

1777. *January* 4th, I landed, after a proſ-erous voyage, in Batavia, and waited again pon my reſpectable friend Dr. HOFFMAN, who ow likewiſe made me an offer of his houſe and ble during my ſtay at this place.

At the mouth of the great river, which flows rough Batavia, a conſiderable way down into the harbour, the current was at this ſeaſon of he year ſo violent, that it required no little aution, and was at the ſame time attended with me degree of danger, to work one's way up the town in ſloops and other veſſels.

Among other kind friends, whom I now miſſed the iſland, was Dr. HOFFMAN's lady, who ad departed from this world during my abnce. This recalled to my remembrance, how ad, ſhortly before my departure to Japan, ſat wn to dinner in this ver houſe with thirteen rſons; eleven of whom, my friend now inmed me, had been carried off by the fevers hich uſually prevail here, in the ſpace of three eeks, inſomuch, that of the whole thirteen, he d myſelf were at this time the ſole ſurvivors. is furniſhes an irrefragable proof of the morlity and unhealthy climate of this ſpot, where reat number of humid vapours fill the heated

atmoſphere, render the body ſluggiſh, and a readily to receive the ſeeds of putrefaction.

The Governor General *van der* PARR had likewiſe left this ſublunary ſphere in th courſe of the preceding year: in whom I loſt real patron. He was incontrovertibly a man good ſenſe, and had rendered eſſential ſervic to the Dutch Company, although he had n neglected, during the great length of time h he continued in office, to conſult his own i tereſts. To his ſon, who was his ſole heir, h had bequeathed upwards of four millions guilders. The ſupreme authority in all the Eaſ Indies now devolved into the hands of *va* RIEMSDYK, an old and ſuperannuated ma who, if we except an unwearied attention t his own intereſt, did not ſeem ever to have bee poſſeſſed of any remarkable qualities. The fir time, after my landing, that I waited upon h Excellency, which is the uſual title of this Chi Magiſtrate, I was immediately conſulted wi reſpect to his Lady's illneſs, which conſiſted a cancer in one of her breaſts, and was beyo all hope incurable.

After I had farther paid my court to my ben factor, M. RADERMACHER, a gentleman, whom the Sciences at large are greatly indebte and the active friend of the whole human ra I made it my firſt care to inſpect the vari thin

ings, which I had left in charge with my hoſt a large cheſt, and in a very capacious ware-uſe. But how great was my confuſion and prize, when on opening the cheſt I diſcovered, at notwithſtanding it had been placed upon ttles, and in this manner raiſed above the nd, the major part of the Herbs, that I had dly collected in Java, together with a great of the books that I had left behind me, moſt to a third of the height of the cheſt bottom, entirely rotten and mouldered h the damp air, which had been pent

ſeaſon of the year it ſtill rained vio-ommonly every day, particularly in the ing and evening, beſides flitting ſhowers. e ſky was for the moſt part overcaſt, and the thick and damp, inſomuch that it was im-ſſible for me to dry any of the herbs I had llected, as every thing mouldered away and tted in rooms that were cloſe ſhut. The rainy nths are reckoned from December to March, ring which time the air here is cool, and fewer forders prevail, and this ſeaſon is what they nerally call their winter. After this follows e warmer ſeaſon, when the heat is ſcorching id intolerable, and the ſky clear, with a con-ual ſucceſſion of dry weather.

The New Year of the Chineſe now co
menced with the firſt New Moon in Februa
and was celebrated by them with great ſolemni

M. RADERMACHER, the State-Counſell
from whom I experienced extraordinary frien
ſhip and protection, inſiſted on my being
gueſt once or twice a week at leaſt, and gi
him an account of what I had collected
diſcovered, as well in Japan, as in the
of Batavia; the environs of which, ever
the moſt ſultry heat of the afternoo
others were enjoying a comfortable af
nap, I every day viſited and explored.
of theſe occaſions a circumſtance h
which greatly aſtoniſhed both him and
It chanced that one day M. FEITH, who
lately the Chief at the Dutch Factory at Japa
and whom I had accompanied the foregoi
year to the Imperial Court, was queſtioned by M
RADERMACHER concerning the reigning E
peror in Japan, and whether he was acquainte
with his Imperial Majeſty's name. This que
tion he was then obliged to anſwer in the neg
tive, although he had lived at leaſt fourteen yea
in that country, during which period he had fo
times had an audience of the Emperor, in t
character of ambaſſador. The following d
when I had the honour to dine at this ſa
Counſellor's houſe, he imagined that he cou
propo

propoſe a queſtion to me, which I ſhould be at a loſs to anſwer; though he had hitherto ſeldom found me non-pluſſed. I was accordingly interrogated with reſpect to the name and age of the preſent Emperor of Japan. And as I on this occaſion was not only able to anſwer to theſe queſtions, but likewiſe informed them, that I had procured authentic intelligence concerning the names of the Eccleſiaſtical Emperor, the Hereditary Prince, and of the Emperors both Spiritual and Temporal, who had died in the courſe of the preſent century, both the Counſellor himſelf and the whole company were greatly amazed, that I ſhould have been able to penetrate into a ſecret, which was eſteemed inſcrutable, and which an ambaſſador in the ſpace of many years had not been able to diſcover. This liſt of the Japaneſe Emperors, which I left with M. RADERMACHER, was ſince introduced into the Tranſactions which a Literary Society in Batavia publiſhed ſome years afterwards. The confidence and friendſhip which both the Interpreters and Phyſicians in Japan had conceived for me, were highly inſtrumental in procuring me the information which I received, in what relates to the Political Hiſtory of Japan.

KÆMPFER has given in his Hiſtory a copious liſt both of the Eccleſiaſtical and Temporal Emperors in Japan, who had ſucceeded each

other till the year of his departure from that country. The continuation of this liſt to the preſent period was a principal object of my wiſhes, however difficult the attainment of it was with any tolerable degree of certainty. During my abode in the Metropolis, Jedo, however, I was fortunate enough to procure, by means of the Principal Interpreter, and the Imperial Phyſician, the above-mentioned Catalogue both of the Eccleſiaſtical and Temporal Emperors, and the name of the preſent Emperor. And with theſe my Japaneſe friends I have in the ſequel, for many years after my return to my native country, maintained a very inſtructive correſpondence; and I have even afterwards had a moſt deſirable opportunity, with the kind aſſiſtance of my honoured patron Profeſſor BURMANN, of Amſterdam, to recommend and promote one of my friends and beloved pupils, Dr. STUTZER, to India and the remote iſland of Japan.

Although the climate is extremely unhealthy, eſpecially in the town, the Europeans, with very little exception, lead here a very irregular life. At dinner they inflame their blood with ale and wine, and after dinner, with ſmoking tobacco, drinking ale and wine. At half paſt two in the afternoon they go to bed, and take their reſt till five o'clock. The evening is ſpent in company,

pany, and with ale, wine, cards, and that altogether indiſpenſable article of life, the tobacco-pipe. At half paſt nine in the evening, they again ſit down to table to eat, at the ſame time that they drink profuſely of ale and wine. After ſupper is finiſhed, recourſe is again had to the delicious pipe, which had only been laid aſide during the repaſt, and which is now a ſecond time lighted up, to burn till eleven o'clock, its fires being all the while mitigated with continual libations of ale and wine, till rendered giddy with heat and theſe liquors, and at the ſame time half drunk with the ſmoke of tobacco, weary and drowſy, they at length retire to bed, to enjoy a reſtleſs ſleep and comfortleſs repoſe.

After I had collected in the vicinity of Batavia whatever at this ſeaſon of the year was to be found there, of the various productions of nature, I wiſhed to inſpect the interior of this incomparable iſland. For this purpoſe I went on board the *Vreedeluſt*, and ſailed in this veſſel along the northern coaſt of Java to Samarang.

WE ſailed from the road near the town on the 23d of *March*, and on the 31ſt day following paſſed by *Cheribon*, one of the principal Factories, where the Eaſt-India Company keeps a Governor, whoſe yearly income was eſtimated at 70,000 rix-dollars.

The mountain, near the town of Cheribon, has ſeveral times been in a ſtate of conflagration. Two years ago a commotion took place, and the aſhes, which in conſequence of this it vomited up, deſtroyed ſeveral thouſand plantations of coffee in the neighbourhood.

April 2d, we ſailed by Mount *Tagal*, which is frequently ſeen burning at the top. At this time we ſaw only a ſmoke iſſuing from the ſummit about the thickneſs of a man's body.

In the courſe of this voyage, which laſted long enough, on account of the ſhiftings of the wind, that now took place, I ſeveral times ſaw ſerpents of different kinds come from the land, and ſwim upon the water; one of theſe was above two feet long, and ſprung to a conſiderable height out of the water. When the wind ſhifts, one is frequently becalmed, and the heat is very troubleſome. It was alſo now the ſeaſon of the year when the weſterly winds began to ceaſe,

ceaſe, and the eaſterly trade winds were expected to ſet in again. On this occaſion our Captain informed me, that he, as well as ſeveral other experienced ſeamen, thought they had obſerved with certainty, that the eaſterly winds ſet in later, and that the trade-winds were in general much weaker, ever ſince the dreadful earthquake which deſtroyed Liſbon, and which was felt ſo univerſally all over the globe.

Notwithſtanding that the iſland of Java produces ſugar-canes in abundance, and ſugar of courſe is not extremely dear, we were in our preſent voyage furniſhed with a very wretched commodity indeed, and put off with coarſe brown ſugar inſtead of white. When I, in behalf of the ſick, remonſtrated with the Captain on the ſubject, his reply was, that it was not unuſual for the ſhips to be ſupplied with brown and coarſe ſugar, inſtead of the white powder-ſugar which the Government allowed; and that the difference between the prices of theſe two ſorts went into a common purſe, for the benefit of the Superintendants of the warehouſes, where they were packed up.

April 9th, I landed at *Samarang*, a middle-ſized handſome, and well fortified town, and at the ſame time the principal eſtabliſhment for the whole coaſt of Java, on which all the other

Factories,

Factories, Cheribon excepted, are dependant. It was conquered by the Dutch in 1708.

Immediately upon my arrival, I took up my reſidence with the worthy Phyſician of the Hoſpital, a man, who had had great experience in Surgery and the practice of Phyſic, and who ſhewed me much friendſhip and kindneſs. But I had hardly landed, before I was taken ill, and was obliged to take to my bed, attacked with a tertian ague, an illneſs which I had brought upon myſelf, when on board, by leaving the window of my cabin open at night, whilſt I lay aſleep, in conſequence of which the perſpirable matter was checked and repelled by the coolneſs of the night-air. Although the fever was very violent, I was fortunate enough to get rid of it, by taking the *Extract of Bark*, after I had previouſly purged myſelf, and ſuſtained ſeveral febrile paroxyſms. Meanwhile the ſhip proſecuted its voyage to *Juana*, a Factory a little farther on upon the coaſt, in order to take in there its lading of timber and lumber.

Samarang is ſituated upon a large river, at no great diſtance from the ſea-ſhore. It is garriſoned with about 150 ſoldiers, though the Factory was ſaid, in fact, to have 300 men belonging to it. The yearly income of the Governor was ſuppoſed to amount to 80 or 100,000 rix dollars; for which reaſon, this lucrative poſt was generally

nerally given to the relatives or favourites of the Governor-General, who were however ſeldom allowed to continue in this office above three years, when they were for the moſt part promoted to the rank of Counſellors of State, and were obliged to leave their place to another.

I had ſcarcely recovered from my fever, which, however, was not very ſlight, when I undertook, with the Governor's permiſſion, and in company with Dr. BOENNEKEN, Phyſician to the hoſpital, a journey, above 180 miles into the country, quite up to the mountains. The Governor, on this occaſion, did me the favour to furniſh me with his paſſport, directed to all the Commandants at the Company's fortified poſts, and requeſted me to direct my attention likewiſe in this expedition to all ſuch plants, as either already had been employed as remedies, or elſe might ſerve in the ſtead of theſe, for the uſe and behoof of the Hoſpitals. For this purpoſe, he likewiſe commanded Dr. BOENNEKEN to accompany me, in order that he might acquire a perfect knowledge of them.

April 23d, we ſet out on horſeback to one of the Company's poſts, called *Unarang*, in which place a Serjeant is maintained with about twenty privates.

On the 24th, we proſecuted our journey to *Salatiga*, where there is another fortification, with

a Commandant in it, who is an Enſign, and has ſomewhat above twenty men under him.

On the 26th, we rode on to *Kopping*, a Javaneſe village, ſituated high upon a mountain. The climate is both cold and healthy of this place, which is not the leſs fertile on that account. Among other remarkable circumſtances, which I noticed in my journey, was the following, that the Indian Fig-tree (*Ficus Indica*), which grows to a conſiderable height in the forests, hangs its bough down ſo low, that they touch the ground, and taking root there, ſhoot forth new ſcyons, which in proceſs of time become large trees. In this manner a ſingle Fig-tree forms with its boughs that have taken root, a great number of apartments or chambers, as it were, and ſpreads to a conſiderable diſtance.

Kamadu is the name given to a kind of leaves, which ſting like ſtinging nettles, but much more violently, and even to ſuch a degree, as to cauſe an inflammation in the ſkin. On every vein they have ſharp-pointed pricklets, which are tranſparent, and contain a fluid that cauſes this irritation. The kind which I ſaw is found to be a ſpecies of the nettle before unknown, to which I at this time gave the name of *Urtica ſtimulans*. Any one that, unacquainted with its properties, ſhould attempt to break off the twigs of this little tree or ſhrub with his naked hands, would pay

pay dear for his imprudence and ignorance. The Javaneſe are very well acquainted with it in general, and the Dutch Coloniſts call it *Buffel's-blad*, or Buffaloe's leaf. It has ever been cuſtomary with the Javaneſe Princes on holidays, by way of amuſement, to let a Tyger and Buffalo fight together in an area, fenced in with planks, near which a great number of ſpectators can ſit in perfect ſafety. If on ſuch occaſions the Buffalo ſhews himſelf tardy in attacking his adverſary, he is flogged with this plant, which cauſes ſuch a heat and inflammation in his ſkin, that he at length becomes quite wild and outrageous. Whenever any one happens to be ſtung with this nettle-tree, the beſt remedy is, inſtead of waſhing the part with water, which would only render the pain more intolerable, to anoint it either with oil, or elſe with rice boiled down to a ſoft conſiſtence.

On the 27th, we turned back again, and went to *Salatiga*.

On the 28th, we departed from this place, accompanied by the Enſign, to a Javaneſe village, called *Tundang*, where we reſolved to paſs the night. The village was tolerably large, but the houſes were ſmall, formed of bamboo canes, in the ſtile of thoſe huts that are made of branches of trees, the bamboos not being placed cloſer together than what would allow of a paſ-

ſage

ſage for the air; a circumſtance of ſome importance in this hot climate. We did not take up our quarters with any of the Javaneſe, but had a hut built for ourſelves. This was immediately performed by ſome of the Javaneſe, and the buſineſs was completed with ſuch incredible diſpatch, that before we could alight from, and unſaddle our horſes, and unpack our things, not only our houſe was entirely finiſhed, but it was likewiſe furniſhed with a couch to lie upon, three ſtools and a table, all which were manufactured on the ſpot. I ſtood quite aſtoniſhed at this new edifice, and entered with the greateſt amazement under its friendly ſhade. Some of the Javaneſe were employed in cutting trunks of bamboos of different degrees of thickneſs, others made, with two ſtrokes, a hole in each ſide of them, and others inſerted into theſe holes bamboo ſticks of a ſmaller ſize. After this twigs with the leaves on them were interwoven between, and the houſe, in conſequence of a great number of hands being employed on it, was completed in a few minutes. So were alſo the tables and ſtools in a ſimilar manner, although theſe were neither ſtrong nor even, and conſequently not calculated for indolent ramblers of quality, but only for weary travellers.

As we arrived in this place early before evening, I took a ramble to the woods and neighbouring

bouring ſpots, in ſearch of herbs. *Dioſcoreæ* I found both wild and cultivated, twining with their curling tendrils, frequently to the very ſummits of the trees.

And as we had no acceſs to the light, before the aperture that ſerved for the door, a fire was made, round which we placed ourſelves, I, with the herbs I had gathered, and the other gentlemen with their tobacco-pipes. This laſted not long, before a whole troop of Javaneſe, conſiſting of the inhabitants of the village, came and pitched their numerous camp facing us. Among theſe were ſeveral muſicians, with a large band of dancers, male and female, who had been ſent for hither by my companions, for the ſake of diverting me, and that I might have an opportunity of ſeeing the ſports and amuſements of the Javaneſe. Stringed inſtruments, drums, and pipes began to ſtrike up, and the dancing commenced and continued with various motions and geſtures, being moſtly kept up by two dancers at a time. Every one that danced, was obliged to pay a trifle for each dance, either to the perſon with whom he danced or to the muſicians. This rendered it neceſſary for us to ſupply the ſlaves we had brought with us with a few ſmall pieces of money, in order that they might take ſhare in the diverſion.

I cannot

I cannot deny, but that this jovial ſcene and ſpectacle of mirthful amuſement, was, in fact, extremely agreeable and entertaining; but the perſecution which we ſuffered from the gnats in this low ſituation, embittered every pleaſure, and proved an inſurmountable obſtacle to our night's repoſe. Neither yarn-ſtockings nor boots were capable of keeping the gnats from our legs; and although the ſmoke of the fire, as well as of the tobacco, in ſome meaſure defended our faces from their attacks, yet theſe preſervatives proved to me, who never was fond of ſmoke of any kind, quite intolerable. At length, after midnight, I laid me down to ſleep upon my graſs-bed, and buried myſelf in ſuch a manner under a veil, and ſome pocket-handkerchiefs, which I ſpread over me, that the perſecuting gnats were prevented from giving me much diſturbance, any farther than by the inceſſant piping noiſe which they made.

After paſſing a ſleepleſs night in this place, we continued our journey the next morning to *Samarang*, where we arrived on the 1st of *May*.

I waited on the Governor, a friendly, well-bred, and amiable man, and made my report to him of what I had been able to collect and diſcover in my journey. The plants which might be applied with advantage to the uſe of the ſick, as well in as out of the Hoſpitals, were the following, viz. The

The *Fumaria officinalis*, called by the Javaneſe *Rumpiung*, was found in a ſmall quantity in the mountainous tracts near Kopping.

The *Rubus moluccanus*, and two other ſpecies of this genus, were found between Salatiga and Kopping, on the ſides of hills, and particularly near rivers, in profuſion.

The *Artemiſia*, Mugwort, called by the Javaneſe *Domolo*, and by the Malays *Seroni*, grew between Salatiga and Kopping, in the rivers and plains, in the greateſt profuſion.

The *Sonchus oleraceus*, called by the Javaneſe *Dimboring*, was ſeen near Kopping; as was likewiſe

The *Lactuca*, or Lettuce, (by the Javaneſe *Belot*) but in a ſmall quantity, between Salatiga and Kopping.

The *Scolopendrium* had taken up its quarters among the trees between Unarang and Salatiga.

The *Capſicum*, or Cayenne Pepper, to which the Javaneſe give the name of *Lombo*, was found wild between Salatiga and Kopping.

The *Oxalis acetoſella*, the *Sàmangi Kunong* of the Javaneſe, occurred every where very common.

The *Chenopodium*, in the Malay language *Paijam china*, grew near Kopping.

The *Sanicula*, in the Javaneſe language *Spran*, grew near the rivulets between Salatiga and Kopping.

A *Ranunculus*, and a ſpecies of *Perſicaria*, which the Malays called *Dukut Parang*, grew along with the preceding plant.

The *Schœnanthus*, in the Malay language, *Sire*, was ſeen between Unarang and Kopping.

The *Fragaria veſca*, or Strawberry, the *Mani-kan* of the Javaneſe, occurred in this warm country near Kopping and the rivulets in that neighbourhood.

The *Clematis* twined round the ſhrubs between Salatiga and Kopping.

Agrimony, in the Malay tongue *Upan Upan Karſo*, grew along with the preceding plant.

The *Salicornia fruticoſa*, the *Chimbine* of the Javaneſe, grew on the ſhores of Samarang.

The *Vitex* (or *Agnus Caſtus*) was called by the Javaneſe *Siminæ*, as likewiſe *Lagundo*, and was very common in many places.

The *Coſtus Arabicus*, which I had before found very common and plentiful in the dikes that environed Batavia, was likewiſe found in great plenty here, from Samarang all the way to Salatiga, growing among the buſhes and the high graſs.

The *Leonurus cardiaca*, called in the Malay tongue *Klengenlang*, grew near Kopping.

Urticæ, or Nettles, grew here and there, in different parts, tolerably common.

The *Hibiſcus abelmoſchus* made an elegant figure, with its leaves and beautiful flowers, between Samarang and Salatiga.

The

The *Adiantum* was found in the ſkirts of woods, and even in the woods themſelves, as alſo near the rivulets.

The *Datura Stramonium*, called *Rotecubung*, grew between Samarang and Unarang.

The *Smilax* in the woods near Unarang, and

The *Solanum nigrum*, or deadly Nightſhade, near Kopping.

The *Verbeſina acmella*, the *Sironi* of the Malays, was common every where.

The *Amomum Zingiber*, Ginger, which the Javaneſe call *Chai*, and the Malays *Bangle*, occurred for the moſt part cultivated by the Chineſe; but the *Amomum zerumbet*, which both the Javaneſe and Malays ſometimes call likewiſe *Bangle*, although moſt commonly it bears the name of Lampryang, grew in profuſion, chiefly on ſandy and meagre ſpots of land, between Salatiga and Samarang.

The *Curcuma*, Turmeric, by ſome called *Kunir*, by others again *Kunjet*, I found only near Samarang.

The *Kæmpferia*, or *Semput*, grows near Salatiga, in watery and low vallies.

The *Amomum compactum*, Cardamon, by the Javaneſe called *Mojei*, and its fruit *Kappelogo*, is cultivated near Salatiga.

The *Piper longum*, long Pepper, the *Chabe* and *Dandang Muſſu* of the Javaneſe, grew co-

piouſly in the woods near Salatiga, as likewiſe elſewhere, frequently on the very ſtone-fences.

The *Piper nigrum*, black Pepper, called Maritio, grows in profuſion near Salatiga, in the woods.

The *Piper cubeba*, or Cubebs, which has obtained the name of *Komuchus*, abounds in the woods near Tuntang, and is the ſort which is ſent over to Europe.

The *Melilothus*, both by the Javaneſe and Malays called *Treba*, I had before obſerved at Batavia; now it was found near Salatiga.

The *Cannabis ſativa*, or Hemp, likewiſe grew on a ſpot near Salatiga; it was high, but ſtill remained a ſhrub, and was called by the Javaneſe *Ginge*.

The *Cyperus rotundus* grew every where common.

The *Saccharum officinarum*, or Sugar Cane, is called *Tebu*, and was cultivated all over the country, and at the ſame time grew wild near Salatiga.

The *Mirabilis Jalappa* occurred for the moſt part cultivated, but was likewiſe found wild near Salatiga, and is called in the Malay language *Rambal Pokul Ampat*, an expreſſion which anſwers to the *Vier uhrs bloom* (Four hours Bloſſom) of the Dutch.

The *Cynogloſſum* (Hound's-tongue), the *Upas Upas Sapi* of the Malays, was found between Salatiga and Kopping.

The

The *Cicuta*, (or Hemlock,) was found juſt above Salatiga, in the clefts of mountains, and by the ſides of rivulets.

The *Plantago major*, or greater Plantain, vegetated near the rivulets, and in other places, in abundance.

The *Ricinus communis*, and the *Jatropha curcas*, which in the Malay tongue was called *Jarrak*, were both of them extremely common both here and in other places on the iſland of Java.

Of the *Arum* there were various ſorts, very common, near ponds, and in every ditch.

The *Caryota urens*, called the *Saguer* tree, grew between Salatiga and Kopping, and was ſaid to be the real tree of which Sago is made.

The *Ocymum baſilicum* was common hereabouts, in like manner as the *Ocymum ſanctum* was near Batavia and at other places.

The *Tamarindus indica*, a very tall, ſtrong, and handſome tree, was very common every where.

The *Caſſia fiſtula* and *javanica*, called *Dranguli*, the long cylindrical fruit of which is exactly like canes or walking-ſticks, grew common in the woods near Tundang.

The *Acorus calamus*, or Calamus Aromaticus, grew wild near Samarang, and in many other places, winding round the trees, and with its prickles impeding the progreſs of the traveller.

The *Crinum latifolium*, which may be uſed inſtead of the *Scilla*, or Squills, grew here, near Batavia, and in other parts.

The *Sida aſiatica* is called by the Europeans Malva arborea, and grows near Batavia, Samarang, and other places, common.

Of *Gnaphalium*, or Cudweed, two ſorts are found near Kopping, which the Javaneſe call *Sombong Madur*.

The *Sambucus canadenſis*, the *Soobo* of the Javaneſe, grows in the clefts of mountains near the rivulets in the neighbourhood of Kopping.

The *Poterium ſanguiſorba*, grows between Unarang and Samarang.

The *Ophiorhiza mungos*, or *Lignum columbrinum*, called by the Javaneſe as well as the Malays *Kajo ular* and *Bidara laut*, is in different parts of the country tolerably common.

Jaſminum, or Jeſſamine, was gathered near Salatiga.

The *Coriandrum ſativum*, or Coriander, called by the Javaneſe *Katumjar*, I found in ſome few places, where ſome other plant was cultivated; ſo that it appeared to have been brought from Europe with the ſeeds.

Piper betle and *Areca catechu*, two plants of which the Indians cannot diſpenſe with the uſe, are found every where.

A German

A German Surgeon, who had formerly been in the ſervice of the Company, and was greatly beloved by the Governor in Samarang, had been ſo unfortunate as to have contracted Cataracts in both his eyes, inſomuch that he was now totally blind. The Governor, on being informed by the Phyſician of the Hoſpital, who was my hoſt, that I thought myſelf capable of reſtoring this Surgeon to his ſight, made me an offer of a hundred Ducatoons, in caſe I ſucceeded in the attempt; and as all my chirurgical inſtruments had gone in the ſhip to Juana, he ſent off a courier immediately to fetch them. But this man, who was ſomewhat above the middle age, muſt himſelf have had very little confidence in his own profeſſion of ſurgery, becauſe he was full as obſtinate as he was blind, and would in no wiſe ſuffer himſelf to be induced or perſuaded to undergo any operation. I enquired, therefore, whether no other blind perſons could be found, to whom I might adminiſter ſome relief, and at the ſame time inſtruct my worthy hoſt in an operation, which is one of the fineſt in the whole Art of Surgery. He immediately procured an elderly European man, and a Chineſe woman of 70 years of age, both of whom were blind in both eyes; the former being abſolutely ſtone-blind, and the latter only able to walk a little without leading. On both of them I performed

the operation with ſucceſs, they being both reſtored to their full and perfect ſight. And indeed I was perſuaded, previous to my departure from this place, to leave to my hoſt not only theſe ophthalmic inſtruments, but likewiſe ſeveral other inſtruments, which are but ſeldom required to be uſed on board of ſhip.

The flowers, both ſingle and double, of the *Nyctantes Sambac*, are often ſtrung upon a thread, and are uſed here likewiſe for garlands for the head by the European ladies. Sometimes at balls the gentlemen receive a ſimilar garland, with a *Champaca* flower in the middle to hang round their necks. The ſcent of it is extremely agreeable, and the colour likewiſe, which is as white as ſnow, has a very pleaſing effect.

Coffee is cultivated in a great many places, and theſe plantations are beautiful beyond deſcription. The coffee-tree produces its firſt pods in the third year. A hundred trees yield upon an average three or four cheſts of beans, each cheſt weighing 120 pounds averdupoiſe, one year more, another year ſomewhat leſs. In the beginning the Dutch Company is ſaid to have paid the Javaneſe twenty-five rix-dollars for every cheſt of coffee; at preſent they pay no more than ſix, of which the *Tommegom*, or Land-Voigt, receives two rix-dollars; ſo that the labouring Javaneſe, who plants the coffee, does not receive

ceive more than four. The *Erythrina corallodendrum*, which is called *Dadap*, was here always planted between the coffee-ſhrubs, that ſtood thin, and at a diſtance from each other, in order to give the whole plantation a moderately thick ſhade and ſhelter againſt the ſcorching rays of the ſun.

It was inconceivably pleaſant to behold ſuch a plantation, viz. a grove of trees in ſtrait rows, conſiſting partly of tall and thinly-planted trees, and partly of ſhrubs, the ſpreading, and ſomewhat dependent branches of which were covered with a great number of coffee-pods, and at the ſame time with a cluſter of white flowers.

May 3d, the Javaneſe celebrated their New-Year; when the *Patti*, or High Sheriff of the Province, who reſides here, gave a grand entertainment, to which all the Company's ſervants in Samarang were invited.

May 14th, I ſailed in a Dutch ſhip from Samarang to Japara, where I was inexpreſſibly well received and much befriended by M. *van der* BEEK, who was Reſidentiary at this delightful place; a gentleman, who not only poſſeſſed great knowledge himſelf, but likewiſe protected and encouraged the Sciences and their votaries in this part of the Eaſtern World. His ſingular kindneſs towards me I ſhall never bury in oblivion; but my deſtiny would not permit me to make any

any long ſtay here; as the ſhip at Juana had already taken in its lading, and I was conſequently obliged to leave this place in haſte, in order to accompany it to Batavia.

May 20, I proſecuted my journey on horſeback over-land to Juana, accompanied by a Javaneſe, whom M. *van der* BEEK had given me for my conductor. And as the journey was too long to be performed in one day, during the heat, I received at the ſame time letters of recommendation to a certain Prince, whom I was to wait upon in my way thither, and who had married the Emperor's ſiſter. With this Prince I took up my night-quarters; after having had the happineſs to ſup at his table with him alone, and converſe with him in broken Malay, upon various topics. The ſilence of the night, however, was very much interrupted both by ſcriech-owls and other animals, whoſe cries and ſhriekings laſted all night long. The following day, towards evening, I arrived in Juana, and went immediately with a ſloop on board the ſhip, which had already got to the diſtance of ſeveral miles from the road.

The coaſt on the northern ſide of Java is very low, and the harbours ſhallow, for the moſt part muddy: on this account the ſhips are obliged to lie at a conſiderable diſtance in the roads, and if they are heavy laden, they are in ſeveral places

places ſtranded, and ſtick faſt in the mud. This happened now to be the caſe with us at Juana, although the ſhip had already lain at a conſiderable diſtance from the ſhore, in order to take in the remainder of her lading: and notwithſtanding that we ſeized the opportunity, and hoiſted our ſails at high water, yet we were obliged to unload a heap of planks into large boats, in order to lighten the ſhip. And when at laſt there blew a favourable wind, yet ſtill we ſailed for two whole leagues together ſo deep in mud, that the water in the wake of the ſhip was turbid, and of a blueiſh caſt, from the blue clay. And indeed all ſeamen teſtify, that the water in theſe parts is continually decreaſing, whilſt the ſtrand increaſes, and the harbours are filled up with ſhoals and ſand-banks. This is ſaid to have happened in ſo great a degree, ſince the Dutch Company firſt ſent their ſhips hither, that the place where they at that time uſed to lie is now a moraſs, and they cannot now approach within a conſiderable diſtance of it. In fact, this northern ſide of Java is the moſt fertile, while, on the other hand, the ſouthern coaſt is very mountainous, has deeper water, and is more barren.

Between Juana and Japara a promontory extends into the ſea, which we now ſailed by. There is a rock here, which has received the name

name of the *Devil's Rock*, becauſe Corſairs are ſaid frequently to harbour here, as well as near the iſlands of *Intermaja* and *Boomſjes*, who attack and capture every veſſel, great or ſmall, that is not well armed, or that does not ſail under convoy. Theſe Corſairs are not Javaneſe, but come from the coaſts of the iſland of Borneo, and the circumjacent iſles, and therefore cannot be extirpated.

Our journey proved very proſperous, and we arrived again at Batavia on the 1ſt of June.

As ſoon as I had returned to Batavia, I was called upon to act as Phyſician on board the Hoſpital-ſhip, that is ſtationed in the road juſt before the town. Although, on a ſhip's arrival in the road, all the ſick that are on board are always removed immediately to the Town-Hoſpital, as well as thoſe who afterwards may be taken ill; nevertheleſs an Hoſpital-ſhip (as it is called) which is for the moſt part an old veſſel unfit for any other uſe, is kept here for the reception of thoſe, who are taken ill in the night, as the town is ſhut up, and no one can obtain entrance. This duty, or rather night-watch, is undertaken in rotation by all the Ship-Surgeons, who are in Batavia; but they ſeldom perform it themſelves, but hire ſome old Surgeon for this purpoſe in their ſtead. Thus I was this time excuſed from it for one Ducatoon.

I had

I had now the good fortune to form an acquaintance with a worthy countryman of mine, M. WIMMERCRANTZ, a Captain of Engineers in the Dutch Company's ſervice, in which he was as uſeful, as he was univerſally beloved and eſteemed. He lived in the ſuburbs, and not only received me with great friendſhip, but alſo afterwards, during my ſtay in this place, rendered me actual ſervices; and, in ſhort, ſhewed me much of that favour, which he had before laviſhly beſtowed upon ſeveral of his beloved countrymen.

On the 19th of June, as I had ſtill to wait the arrival of ſome ſhip, that ſhould ſail to Ceylon, which iſland I wiſhed to viſit, I made, with permiſſion of the Governor, and in company with Baron von WURMB, likewiſe attended by an officer, whom the Commiſſary over the natives (for the interior) had ſent with us, a journey up the country to the warm Baths, and the (ſo called) Blue-mountains. For this journey Captain WIMMERCRANTZ had the goodneſs to accommodate me with the loan of his own horſe, of which I had the uſe both on my journey thither, and on my return.

We travelled the firſt day to *Tanjong*, a place, which at this time belonged to the Privy-Counſellor CRAAN, and is ſituated about eighteen poles from the capital. The country is here

meaſured

meaſured off with poſts, as in Europe, but however of different lengths.

On the 20th, we travelled in the morning about twenty-five poles, to *Chipinong*, where we dined, and afterwards went farther by *Chimangis* and *Chiluar* to *Buytenzorg*, fifty poles from Batavia. This place is intended for the pleaſure of the ruling Governor General, and has been made choice of and built for this purpoſe by Governor-General IMHOFF. The building, which is of ſtone, is very handſome, conſiſting of two wings and a little citadel, with beautiful gardens between. By reaſon of its diſtance from the capital, however, the Governor-General can ſeldom reſide here.

On the 22d, we travelled to *Chiſeroa*, and from thence farther over high mountains to *Chipannas*. Both theſe places, as likewiſe *Pandogedè* and *Arkidomas*, belong to the Governor-General, or rather to the Dutch Company. Here we reſted over night, and viewed the warm Bath, which is called in Malay *Chipannas*, and gives its name to the circumjacent country.

The warm Bath ſprings up almoſt in the middle between the two large ridges of mountains, in a valley. The water was found not to be boiling hot, but the finger could bear the heat, when placed in it. It bubbled up in ſeveral places. A hut was built over the veins, that

conveyed the water into the Bath. The hole itſelf was not deep, and the force of the ſpring not very great: the earth around it was of the colour of iron-ruſt, and on the ſides of the water a thin cruſt of a deep green hue had ſettled, that perfectly reſembled verdegriſe. The houſe, which was built for thoſe that uſed the Bath, conſiſted of two parts: one chamber was very large, through which the water was conducted to the other: here were two drains in the floor, to purify the water from its filth: the other chamber had a large ſquare hole in it, lined with boards, and furniſhed with ſtairs. To this room ran two pipes of metal, out of which either cold or warm water could be let in at pleaſure to any height one choſe, during bathing. At the top of the water a cruſt was formed, nearly of the thickneſs of a farthing, and of a ſaltiſh taſte. I was informed, that if the water were uſed for drinking, it opened the body, and therefore was ſeldom applied internally, but for the moſt part externally. Some time ago a great number of ſick perſons, ſome of them even from the Hoſpital, were ſent hither from Batavia, to uſe the Bath, and for this purpoſe an Hoſpital was inſtituted here, which at this time ſtood unoccupied and uſeleſs. A European Farmer now lived here, and had the care and inſpection of the Bath and ſeveral gardens.

The

The climate is very healthy and refreſhing: indeed the air, eſpecially in the morning and evening, was not only cool, but abſolutely cold, inſomuch that I, who had not brought a great coat with me, was chilled and perfectly ſhivered with the cold evening air, in a country, that lies almoſt directly under the Æquator.

Cabbages, eſculent-rooted plants, greens, and fruit-trees, from Europe, are cultivated here, and thrive greatly; as alſo at *Arkidomas*, *Chiſeroa*, and *Pondogedé*, from all which places refreſhments are ſent three times a week to the Governor-General's table, in Batavia. Oranges ripen, and are much more delicious than thoſe which grow nearer to Batavia.

The Javaneſe reported, and endeavoured to perſuade the Europeans to believe, ſo ridiculous a ſtory, as that on the mountains of *Chipannas* a ſpecies of Monkey was found (*the Orang Outang*) which had curling hair, and retroverted feet. No European had ever ſeen any ſuch here.

The Javaneſe, and thoſe Chineſe that lived among them, had their roofs covered with cleft bamboos, which were laid one upon the other, almoſt like tiles.

I ſaw a ſpecies of *Ardea* in this place, which reſembles the *Antigone*: the *roſtrum* is *albo-flaveſcens*; *gula nuda, flava*; *caput calvum, albidum*;

dum; *pedes cæruleſcentes*; *remiges cinereo-nigri*; *dorſum et cauda nigra*; *abdomen albidum*.

The turtle doves (*Columba riſoria*), which at the Cape of Good-Hope are always blue, are here of a paler colour, and for the moſt part white.

Kadondon is a wood that is uſed for quickſet-hedges.

Andevala is the name given to a climbing plant with tripartite leaves, which was reported to be a good antidote againſt poiſon.

Korang garing and *Tampal utan* are two plants, with which the Javaneſe dye blue.

Boa kirai is the name of a fruit, which is very aſtringent and auſtere.

Tingling mintik is ſaid to be a good and cordial remedy.

On the 24th, we went back again over the mountains to Pondogedé. At the ſummits of the mountains, which were covered every where with woods and buſhes, we left our horſes and the road, in order to climb ſtill higher towards the top, and to ſee the extremely well-known and much celebrated pool of water near *Mehemedon*. I here met with the climate of the north of Europe, and among other plants, various kinds of Moſs likewiſe, (*Muſci*) and Lichens, which otherwiſe are ſo uncommon, and indeed ſcarcely ever to be ſeen in the warmeſt climes of India.

We ſtaid over night in *Pondogedé*, and the following day travelled to *Arkidomas*, to take a view of a place, which was very remarkable on account of various ſmall images hewn in ſtone, which were placed in different parts of the wood, three or four together. The Javaneſe have a great veneration for them, and both Javaneſe and Chineſe ſacrifice to them. In our way we ſaw the wild Peacocks, which are kept tame, as being rarities in Europe, flying up and down in the woods, and perching at times upon the boughs of the trees, to ſhew themſelves in all their glory, and make an oſtentatious diſplay of their long, depending, and magnificent tails. I ſhot one of them, which we roaſted in the evening; but found it very dry and inſipid. A commandant from a ſmall fort had borne us company the whole day, and had brought with him two ſoldiers, who blew inceſſantly two ſmall French-horns, in order to frighten away the Tigers. Theſe animals were ſaid to be very dangerous here, inſomuch that they frequently carried off travelling Javaneſe, and not to be able to bear in any wiſe the ſound of powerful wind-inſtruments. We came towards evening to *Buytenzorg*, which place the Javaneſe call *Bogor*; but previouſly to our arrival there, we went to a place near *Paditulis*, to view a ſtone of great antiquity, in which certain characters

were

were hewn, that no one hitherto had been able to read or interpret. The ſtone is nearly of the height of a man, and about two feet in breadth. The characters appeared to me to be written from the left to the right, and conſiſted of eight lines and a half.

On the 26th, we made another ſhort excurſion from the ſtrait road to Mount *Cherroton*, which is worthy of notice in many reſpects. It ſtands quite detached almoſt in the middle of the country. Our chief view in going thither was to ſee its ſingular cavities, in which the Swallows (*Hirundo eſculenta*) build their neſts, that are of a gelatinous nature, and are uſed as food. We aſcended on foot within a ſhort ſpace of time, to the ſummit of the mountain, and found that theſe cavities were, ſtrictly ſpeaking, on the ſouthern ſide of the mountain, and quite covered at the top. They did not appear to have proceeded from a ſplitting or ſeparation of the parts, as no fiſſure was diſcoverable at the top; but it rather ſeemed to me that they originated from the air by a gradual mouldering, becauſe they conſtantly reached to a conſiderable depth, and had water at the bottom. I entered into ſeveral of theſe, and deſcended likewiſe a good way into them, by means of a bamboo-ladder, without however finding any thing elſe than danger, darkneſs, and ſubdiviſions, as it were, into ſeveral diſtinct apart-

ments. The Javaneſe would not allow us to take any neſts away with us; but had nevertheleſs the politeneſs, not only to give us ſome which were undamaged, but likewiſe to preſent us, at our requeſt, with two Swallows, of the ſpecies that built here, and which were ſmall and quite black.

My fellow-traveller and myſelf were entertained in a very ſuperb and coſtly manner by the Javaneſe Governor of the province, at dinner. The Governor himſelf, together with his couſin, and we two travellers, formed the whole company. Our hoſt could both talk and underſtand in ſome meaſure the Malay language, which we ſpoke. The victuals were placed ſeparately before each of us upon ſmall plates of porcellain. Of each diſh conſequently there was no great quantity, but the number of diſhes for each of us amounted to ninety, ſo that we were hardly able to have a taſte of each.

On the 28th, we travelled to a country ſeat belonging to M. DUURKOOP. It was exceedingly elegant, and contained a remarkable tower, which echoed back nine ſyllables with diſtinctneſs. From this delightful place we returned at length to Batavia.

In the courſe of this journey I had obſerved, that the Chineſe had ſettled in great numbers, and that even in the heart of the country; but that

that they nevertheleſs did not live together with the Javaneſe. This, I was told, was forbidden, in order to avoid diſcord and contention, to which the Chineſe were ſaid to be very prone, if they did not change their religion, and ſuffer themſelves to be circumciſed. This, however, did not prevent numbers of the Chineſe from eſpouſing the daughters of the Javaneſe; although the daughters of the Chineſe were not allowed to marry with Javaneſe. And indeed the Chineſe here are not ſuffered to ſhut up their wives, or diſfigure their feet, as they do in China.

I was afterwards very aſſiduous in my viſits to the Hoſpital, where the ſick were properly treated, but died nevertheleſs in great numbers. The number of deaths was computed to have increaſed almoſt yearly, eſpecially of late, in conſequence of the canals, which ſupply the town with water, not being kept ſufficiently clean. To the truth of this I was frequently a witneſs, when both culinary vegetables and dead animals were thrown into the river by the Chineſe, and afterwards floated down into the harbour and road. Since the gentlemen of rank have begun to erect country-ſeats and pleaſure-grounds without the town, this pernicious cuſtom has obtained the aſcendency. From the Public Regiſters I informed myſelf accurately of the number of Europeans, that died in the Hoſpital.

This liſt, from the year 1714, quite down to the year 1776, I ſhall now lay before the Reader.

Year.	Dead.	Year.	Dead.	Year.	Dead.
1714	459	1735	1568	1756	1487
1715	469	1736	1574	1757	1441
1716	453	1737	1993	1758	1638
1717	494	1738	1776	1759	1373
1718	591	1739	998	1760	1317
1719	660	1740	1124	1761	1000
1720	750	1741	1075	1762	1390
1721	614	1742	1082	1763	1750
1722	730	1743	1283	1764	1757
1723	657	1744	1595	1765	1754
1724	769	1745	1604	1766	2039
1725	925	1746	1565	1767	2404
1726	904	1747	1881	1768	1831
1727	676	1748	1261	1769	1740
1728	656	1749	1478	1770	2706
1729	626	1750	2035	1771	2316
1730	671	1751	1969	1772	2305
1731	780	1752	1601	1773	1187
1732	781	1753	1618	1774	1957
1733	1116	1754	1517	1775	2788
1734	1375	1755	2109	1776	2877

Hence may be ſeen that the number of the dead increaſed almoſt from year to year; but this augmentation was particularly conſiderable, after three remarkable changes. From the year 1714 to 1733, the number of the dead was leaſt. In the year 1733, they began out of the town to make a dyke or canal leading to Batavia, on which occaſion

occaſion great numbers both of the Javaneſe and people of other nations died; from this time alſo the number of the dead has conſtantly increaſed. In the year 1761, they began to ſtow in the Hoſpital without the city more ſick people than the two hundred convaleſcents, which were formerly attended there; and from this time forward the number of the dead increaſed ſtill more. In 1775, an Hoſpital-ſhip was laid up in the road; in conſequence of which, as well that year as the following, the number of the dead was the greateſt of all.

At my own deſire, I was taken on board a ſhip, that was at this time bound for Ceylon, in the capacity of firſt Surgeon; notwithſtanding that M. RADERMACHER, as well as my landlord Dr. HOFFMAN, had made many attempts to detain me in this country, by means of ſome advantageous employment. Although I was able to bear heat extremely well, and found myſelf very well in other reſpects in this hot climate, yet it was both diſagreeable and difficult, to tranſact one's buſineſs here; and attachment to my native country rendered me deaf to every repreſentation of advantage from other quarters, even at a time when I could not in the leaſt foreſee any good fortune accruing to me in the country which gave me birth.

Before the ſhip had taken her cargo in for the impending voyage to the weſtern coaſt of India, I made ſeveral other excurſions in the environs of the town of Batavia.

Jaccatra is a tolerably handſome ſpot, a little way out of Batavia; it was formerly the metropolis of this part of the iſland, and was conquered by the Dutch in the year 1619. Here is now kept a ſmall number of ſoldiers, to defend the citadel, and to be, as it were, a bulwark to Batavia.

The Portugueſe came, it is true, to Java long before any other Europeans, and indeed already in 1510; but never could make a firm and laſting ſettlement here. After them came the Engliſh, and ſoon after that the Dutch, in 1596.

The iſland of Java is long and very narrow, in length at leaſt 140 German miles, from eaſt to weſt, and in breadth 30, from north to ſouth.

Three religions are common in Java, viz. the Pagan, with part of the Javaneſe and Chineſe; the Mahometan, with a great part of the Javaneſe; and the Chriſtian, with the Europeans and at the ſame time with ſome of the Javaneſe, Malays and other Indians.

The articles of traffic which Java produces, conſiſt chiefly of Rice, which is excellent, and is exported to many parts of India for ſale; *Cardamoms*, of that ſpecies which has rounded

ſeed-

ſeed-veſſels (*Cardamomum compactum*); *Sugar*, which has been introduced into the country, with a view to its cultivation, grows in abundance, and is exported in the ſtate of brown ſugar not only to all the Indian markets, but likewiſe to Europe. *Salt*, which is exported to ſeveral parts of India, and is exceedingly dear in the Molucca iſlands in particular; *Pepper*, which is moſtly ſent to Europe; *Indigo*, *Callicoe*, and no very inconſiderable quantity of *Cotton-thread*; *Bird's-neſts*, which are for the moſt part, and that with conſiderable profit, ſold in Canton, in China.

The *Loxia oryzivora* is found in abundance in Java, and does frequently conſiderable damage to the rice-fields.

For change, two ſmall ſorts of copper coin were current. One ſort was an ordinary farthing, which the Dutch Company had ſtruck, of the common Swediſh copper, in Europe, and afterwards imported hither. Of this there are two ſorts, perfectly alike, excepting as to ſize, in which point they differ, the one being twice as large as the other. The largeſt of theſe approaches neareſt in ſize to the Swediſh farthings. On the one ſide appear the uſual arms of the Company, together with the date of the year, on the other the arms of the Province in which the piece was coined. The worth of each is eſtimated at double what it would paſs for in Europe,

Europe, ſo that the Company gains by this mode about one hundred per cent. The other ſort is a Javaneſe coin, ſtamped on one ſide with Javaneſe characters, and upon the other with a wreath of flowers, within which ſtands *Duyt Javas*, and the year of the Chriſtian æra, in which it was ſtruck.

In like manner I ſaw ſeveral Dutch ducats in the hands of the Chineſe and Javaneſe; but theſe had been ſtamped on the upper ſide with a little round die exhibiting certain Javaneſe characters, which gave them value and currency among that people.

The Chineſe wear ſlippers with hind-quarters and ſtout ſoles, within which are ſeveral layers of felt, to prevent them from drawing water and occaſioning wet feet to the wearer; but theſe, as well as their boots, which are made on the ſame plan, are heavy and clumſy.

VOYAGE TO CEYLON.

July 5th, 1777, I embarked, with the bleſſing of Almighty God, on board the ſhip *Mars*, in order to ſail in the ſame to Ceylon, being furniſhed with ſeveral letters of recommendation

to

to the Governor and other public Functionaries there.

On the 7th we weighed anchor, and got under ſail, with a calm and proſperous wind, leaving behind us one of the fineſt countries in the world.

On the 11th following, we caſt anchor again off *Anjer*, where we propoſed to continue a few days, and take in ſome caſks of water, for our impending voyage. The Swediſh Eaſt-India ſhip the *Stockholm's Slott*, bound to China, lay in the road already, where ſhe had arrived before us, in order to take in a ſupply of water, and I had in conſequence the pleaſure to meet with here and embrace ſeveral of my dear friends and countrymen; as, for inſtance, Captain PETTERSEN, the Supercargoes ALNOOR and BLADH, &c. The water which was taken in at this place, from the rivulets that ran down hither, was, it is true, ſweet, and in ſome meaſure good, but exceedingly turbid: and from the circumſtance, that the landing here was very difficult, and that the caſks were rolled in the water on ſhore, this turbidity was increaſed ſtill more. The water likewiſe conduced greatly to increaſe and keep up the Diarrhœa, which was rife among the crew; nay, it was almoſt impoſſible to drink a ſingle glaſs of it, unleſs Tea or Coffee had been previouſly mixed with it, without occaſioning the inconveniencies abovementioned.

The larger ſpecies of *Piſang* (*Muſa Troglodi-tarum*), I obſerved here to have tolerably diſtinct ſeeds, flat, and almoſt as large as lin-ſeed.

Canes were ſold in great quantities by the Javaneſe that lived in the villages; and the Swedes bartered for ſeveral of the better ſort, in which traffic, with what little I underſtood of the Malay language, I had the pleaſure to ſerve my countrymen, in the capacity of Interpreter.

After this we proſecuted our voyage with ſucceſs and with favourable winds, ſo that we croſſed the Line on the 9th of Auguſt, and on the 28th of the ſame month, came within view of the Malabar coaſt, along which we ſailed, paſſing by *Porca*, *Coilan*, and *Cape Comorin*. Notwithſtanding this the ſhip was very deeply laden, and without any regard to propriety or moderation, ſo that it would certainly have been in a very diſagreeable ſituation, had any violent ſtorm ſprung up. The cauſe of this, as well as of a great many other diſorders, inconveniencies, and calamities, originated in the inſatiable avarice, which prevails among the people in the Company's ſervice. The Captain and all the Officers have the privilege of trafficking with certain commodities, for which purpoſe a certain ſpace is left them in the ſtowage of the ſhip; under cover of this privilege, they introduce and burden the ſhip with many times as much as the weight allowed

allowed them, in order to ſwell the amount of their profits. It is more particularly the Captain and Chief Mate, who ſet themſelves no bounds in their abuſe of this privilege. The commodities, which were taken out by individuals in the preſent voyage, conſiſted of a conſiderable quantity of Rice, ſoft Sugar, and Arrack.

On the 29th, we came within ſight of the iſland of Ceylon, and the day following came to our moorings; but we were within a hair's breadth of ſuffering ſhipwreck, through the ignorance and cowardice of the Maſter. Whilſt we continued conſtantly to heave the lead, it was perceived that we drove too much againſt the ſhoals which lie in the mouth of the channel, which ſeparates the iſland from the continent, and our ſhip threatened to run a-ground, when the Second Mate, a bold and enterprizing mariner, obſerving the too viſible terrors and faint-heartedneſs of the Captain, laid hold of the trumpet, and gave orders to tack about, which in a few minutes brought the ſhip, that dragged very heavily, into deeper water, and all of us ſafely out of all danger; ſo that we could very ſoon afterwards caſt anchor, and return thanks to God, who had ſo miraculouſly delivered us from imminent danger.

The following day arrived from Europe the Zeeland ſhip *William V*, and at the expiration of a few days more the ſhip *Leo*, from Amſterdam.

I for-

I forwarded my letters to Columbo, and had ſoon after the honour to wait upon Governor FALCK, a very learned and ſenſible man, and at the ſame time the moſt diſintereſted of all the Company's Officers I ever met with. He was born in Ceylon, and had ſtudied in Utrecht. The Governor-General, van der PARRA, had been the chief inſtrument of his promotion, of which he rendered himſelf in every reſpect truly worthy and deſerving.

Beſides many others, who honoured me in this place with their friendſhip, I enjoyed alſo a conſiderable ſhare of the favour of M. van SLUYSKEN, who went in general by the name of Captain *Cinnamon*, and was inſpector over thoſe that barked and delivered in the Cinnamon. I was a regular gueſt at his table once or twice a week, where I always met with cheerful and inſtructive company. I contracted likewiſe an acquaintance here with two worthy countrymen of mine, Baron ALBEDYL, who was an officer, and Monſ. von KEULEN, or KJELLIN, who had ſettled here as a Burgher, and carried on a lucrative and extenſive trade to the coaſt of Coromandel. I further augmented the circle of my acquaintance with an honourable veteran, Captain HOPNER, who had ſailed originally from Sweden, in the capacity of a young tar, in a trading veſſel, which being attacked by a Turkiſh corſair,

corſair, he loſt one of his thumbs by a muſket-ball, and afterwards advanced himſelf in the ſervice of the Dutch Company, eſpecially by his knowledge in Engineering and Fire-works. This worthy veteran treated me not only as a friend and beloved countryman in his houſe and family, but made me likewiſe an offer of his table, with the uſe of an apartment during my abode in this place; an offer which I however did not accept, but preferred reſiding at the ordinary inn, that I might, more uncontrolled, make my little excurſions, and collections of the natural productions of this iſland.

Columbo, which is the capital town for the Dutch trade on this iſland, is large and handſome, ſurrounded on all ſides with walls, and very ſtrongly fortified.

The Governor's *palace* is very elegant, although it is only one ſtory high. The balcony is of equal length with the houſe itſelf, and forms a pleaſant and cool apartment, from which there is an entrance to ſeveral chambers on the other ſide.

The *air* is indeed as ſultry here as in Batavia, but as the coaſt itſelf does not lie ſo low, but the country is more elevated, and winds more frequent, the heat proves more tolerable, and the climate is more healthy.

Bathing in cold water, and particularly in the open ſea, near thoſe coaſts which are not infeſted with

with crocodiles, is a very common practice, both with the Europeans, and ſtill more ſo with the Indians. When one takes an afternoon's walk out of the town, one may ſee hundreds, both black and white, young and old, free and ſlaves, and indiſcriminately of both ſexes, ſporting in the water, and by theſe means cooling their bodies, and bracing their fibres, which have been relaxed and debilitated by the ſcorching rays of the ſun.

In company with a Ceyloneſe, whom the Governor had graciouſly appointed to attend me, I made daily excurſions in the vicinity of Columbo, and collected diligently with the ſweat of my brow, in the circumjacent diſtricts, the various productions of the land, during the time that ſome of my ſhip's comrades at the Inn expoſed their commodities to ſale, and carried on their traffic in a manner much more beneficial to themſelves. The fellow-traveller appointed me was one of the moſt ſkilful Phyſicians of the country, who communicated to me always both the Ceyloneſe and Malabar names of each plant, as well as the manner in which it was uſed in different diſeaſes. His medical knowledge was very ſmall, prepoſterous, and for the moſt part abſurd, ſo that I could not derive much benefit from him in this reſpect.

The

The *Barringtonia*, with its large and beautiful bloſſom, grew always by the ſide of rivulets and near water, and in a very ſhort time let its numerous ſtamina fall out of its bloſſom.

In like manner the *Dolichos pruriens* grew here tolerably common, with its hairy pods, the hairs of which attaching themſelves to the hands, occaſion much itching, which is allayed by oil, or decoction of rice, and are celebrated as a Vermifuge.

The Company has a Printing-preſs in the town, which has given birth to various publications. Of the Books that have been printed here, I procured the following, for the Library at Upſal:

Kort Begryp der Chriſtelyke Religie, in de Tamuiſche Spraak, door SIGISBERTUS ABRAHAM BRONSVELD. Columbo, 1754, 8vo. i. e. A Compendious View of the Chriſtian Religion, in the Tamul Language.

Tamulſch Kinder-Catechiſmus, door SIGIB. ABRAH. BRONSVELD. Columbo, 1776. 8vo. i. e. The Tamul Catechiſm, for Children.

Evangelium Jeſu Chriſti von Matthæus, in de Mallabarſe Taal. Columbo, 1741. 4to. Or; The Goſpel according to St. Mark, in the Malabar tongue.

Evangelium Jeſu Chriſti von Matthæus, Marcus, Lucas, ende Johannes; ende de Handelingen der

Apoſtelen, in de Tamulſche Taal. Or; The Four Evangeliſts and the Acts of the Apoſtles, in the Tamul language, printed at Columbo, 1748. 4to.

The Four Evangeliſts, in the Cingaleſe language, in 4to. I procured, without any title-page.

Seſtien Predikatien in de Tamulſche Taal. Or; Sixteen Sermons in the Tamul language, by PHILIPPUS DE VRIEST, Columbo, 1747. 4to.

Grammatica of Singaleeſche Taal-kunſt. Or; A Grammar of the Cingaleſe language, by JOHANNES RUELL, printed at Amſterdam, 1708. 4to.

Manis (*the Ant-eater*) is found much in Ceylon, eſpecially near *Negumbo*. The Dutch call it the *Negumbo Devil*, and the Cingaleſe *Caballe*. Its fleſh is given to the ſick to eat, by way of a remedy. The inhabitants have a method of making a hole in its ſkin with a knife, and thus of guiding and governing the animal at pleaſure, the point of the knife, which is kept in the hole, goading and irritating him.

The fruit of the *Solanum melongena* is in general uſe both among the Europeans and the Indians. It is ſuppoſed to expel urine, and diſſolve the ſtone in the bladder.

The fruit of the *Cherimelle* is ripe in October and November, and was made uſe of pickled in a ſtrong brine.

The

The *Marmelle* is likewiſe ripe in October; the internal pulpous part of the fruit is eaten both with and without the addition of ſugar. The fruit is of a very ſlimy or mucilaginous nature, and hence is called *(Slym apel,* or) Slime-apple.

The *Bolange* is eaten in its ripe ſtate with a little ſugar, and unripe, with ſalt. It is of the ſize of a China orange.

Panningai is the fruit of a palm-tree, which grows in great abundance, and particularly near Jafna. It is of an oblong, ſemilunar ſhape, nearly as yellow as a *Piſang*, but ſeveral times larger. It has two, three, or more very hard nuts within it. When dreſſed, it has a ſweet taſte to thoſe who are accuſtomed to it, but ſtrangers do not find it very pleaſant. On being opened, it yields an offenſive ſmell. When the nuts of it are ſown, and the ſpring-leaf comes up, this is cut off cloſe, and eaten either boiled with ſalt and rice, or by itſelf, or is pounded to meal, which can be uſed like any other meal. This ſpring-leaf is called by the Cingaleſe *Kellingo*. From the month of May to the end of the year this fruit is eatable, and conſtitutes the chief nouriſhment of the Malabars. The *Kellingo* may likewiſe be dried for future uſe. The meal made from it is uſed particularly in ſoup with fiſh.

On the 28th of *October*, and the following days, I was requeſted, together with ſeveral Phyſicians, to examine a large quantity of Cinnamon, which had been furniſhed by the King of *Candi*. Half of it was found to be adulterated and ſpoiled, taſteleſs and bad. The beſt of it, which could be ſelected from the maſs, was forwarded to Batavia.

In like manner five parcels were examined of a new kind of Cinnamon, but lately planted, which had been ſent in 1775, as a ſample, to Europe, but on their arrival were found not to poſſeſs the proper flavour, although before, at the time of its being ſhipped at Ceylon, it had proved fine and good. The ſcent of them was now found to be both fine and pleaſant, but the flavour was very weak, or next to none at all. So that it is hardly to be doubted, that they had loſt their flavour during the voyage; the cauſe of which was probably this, that the oil contained in them was too volatile, and not ſufficiently concentrated in theſe young branches, the root of which was not more than three years old. Branches of three years growth, are fit for decortication, it is true, but yet the root and trunk ought to be more aged. And in the very ſhipping and tranſporting of it, a fault had likewiſe been committed, which may have contributed much, if not totally, to the loſs of its flavour,

flavour, for theſe parcels had been packed up in one ſack, and laid in the cabin. Thus the Cinnamon was neither put into two ſacks, nor yet laid among Pepper, as is the uſual practice. And indeed, in 1776, forty-ſeven parcels of this ſame ſort of Cinnamon were ſent to Europe.

Cinnamon is the chief commodity which the Eaſt-India Company fetch from this iſland, and the bark of this Spice is here finer and more valuable than in any other place in the world. All prime Cinnamon is taken from the *Laurus Cinnamomum*, a tree of a middling height and ſize. It is diſtinguiſhed by broader and more obtuſe leaves from the *Laurus Caſſia*, which yields a coarſer kind of Cinnamon, and ſeems to be merely a variety of the former. It is ſo much the more probable, that the coarſer and finer Cinnamon, or the *Laurus Cinnamomum* and *Caſſia*, are merely different varieties, ariſing from the climate, and eſpecially from the ſoil; as Ceylon itſelf does not commonly yield Cinnamon of an equally good quality, throughout the whole iſland, and in all its various tracts. The ſouth-weſt angle of the iſland is the only part which produces the finer ſort of this pleaſant and excellent cordial ſpice, and the places, whence it is chiefly procured, are near *Negumbo*, *Columbo*, *Caltere*, *Barbary*, *Gale*, and *Mature*, all which lie along and near the ſea-coaſt. The Cinna-

mon, which the more inland parts produce, is always coarſer, thicker, more pungent, and biting to the tongue.

I viſited, out of the town, the Governor's villa, which is called *Paſs*, and conſiſts of an elegant houſe, and a large pleaſure-garden, in which Cinnamon has been planted for ſeveral years back. The Cinnamon-tree grows in abundance in the woods, and has been propagated without the adventitious aid of art. The Europeans have believed, and the Cingaleſe even maintained, that Cinnamon, to be good, muſt always grow wild, and be left to itſelf, and, that when planted, it neither thrives nor continues to be genuine. The tree is propagated in its wild ſtate by birds, which eat the ſoft berries, (the kernels of which do not diſſolve in their gizzards,) and afterwards diſperſe and plant them up and down in the woods. This prejudice prevailed till the end of the ſixteenth century, when the Governor, *Yman Wilhelm Falck*, firſt made the attempt, in ſmall, to rear Cinnamon-trees by art, in this garden at *Paſs*. The berries were then ſown, which grew up well and quickly, but had the untoward fate, that the plants ſome time after withered and died. On accurately inveſtigating the cauſe of this, it appeared, that a Ceyloneſe, who earned his livelihood by barking Cinnamon in the woods, and

ſaw

ſaw with vexation the planting of it, which, in time, would render the gathering of it more eaſy and convenient, had ſecretly beſprinkled them in the night with warm water. After the diſcovery of this ſtratagem, the Governor cauſed again, in the beginning of the Seventeenth Century, ſeveral berries to be planted, and in ſeveral places, both upon a ſmall and large ſcale, which grew up, throve well, and had already yielded ſeveral crops of Cinnamon. Thus ſeveral thouſand Cinnamon-trees were now ſeen in this garden, and in this garden alone, to thrive and turn out to be of a good ſort.

In it alſo I ſaw an Areek-tree, which was very tall, but uncommonly ſlender, and at the ſame time, which is very ſingular, divided into two branches, each furniſhed with its reſpective crown.

Here is ſeen likewiſe a *Boraſſus*, or *Sea-Cocoa*, brought from the Maldive iſlands, which had been ſet in earth, had grown up, and was now in the third year of its growth, having only three leaves. The nut had lain eight months in the ground, before it put forth the firſt leaf. The leaf was *multipartito-pinnatifidum*; *pinnis bipartitis*.

Marendan is the name given by the Cingaleſe to the ſandy downs along the ſea-coaſt. The Cinnamon which grows in theſe ſandy plains, is accounted the beſt and moſt delicate. When

the tree is cut down here, and fire afterwards made on the ſpot, the roots ſhoot up again in long, ſtrait ſhoots, which yield an incomparably fine Cinnamon-bark. And from theſe ſhoots come the ſo called Cinnamon walking-ſticks, which in appearance reſemble thoſe from the Hazel-tree, but of which the bark has a cinnamon-ſmell, whenever it is rubbed. I ſeveral times received ſuch ſticks, by way of preſents, although it is ſaid that they are ſcarcely allowed to be exported.

The Cinnamon-leaf has a ſtrong ſcent of Cloves; the root, on the other hand, which, by means of ſublimation, yields Camphor, ſmells altogether like Saſſafras. Cinnamon is generally called by the Cingaleſe *Kurundu*, and is ſaid now to be greatly diminiſhed in the woods, compared to what it was in former times, ſo much indeed, that the Cinnamon-barkers, for ſeveral years, have not been able to procure the quantity required.

The coaſts around the whole iſland of Ceylon, to the diſtance of ſix or more leagues inland, belong entirely to the Dutch Eaſt-India Company, and are under the juriſdiction of its Governor; although the country is inhabited by Cingaleſe, who at the concluſion of the war became ſubjects to the Company. The interior, middle, and mountainous parts of the iſland, belong

belong to the King or Emperor in Candi, who is now ſo completely hemmed in on every ſide, that he can neither ſmuggle, nor ſell any Cinnamon to foreign nations.

Jacberi is the name given to two ſorts of *Crotalaria*, which grow here pretty plentifully, viz. the *laburnifolia* and *retuſa*, both with yellow flowers. Neither of theſe, nor yet the *Meniſpermum cocculus*, can be what is called the *Radix Colombo*, or Columbo-root, which for ſome years paſt has been introduced into Europe, and recommended as a good medicine. It derives its name from the town of Columbo, from whence it is ſent with the ſhips to Europe; but it is well known that this root is neither found near Columbo, nor upon the whole iſland of Ceylon, but is brought hither from the coaſt of Malabar. The *Crotalaria retuſa* is an annual plant, whoſe root therefore cannot poſſeſs any medicinal virtues. The *Meniſpermum cocculus* is a common climbing plant in the woods, the root of which I had ſeveral times cauſed to be dug up, and found it bore no reſemblance to the Columbo-root, either in its virtues, taſte, ſize, or external appearance, being exceedingly thin, with elevated ridges, and very long.

Sacſander and *Iremus* were two very celebrated plants with the phyſicians of this place. The former differs in ſeveral reſpects from the latter.

The

The former is an *Ariſtolochia indica*, the root of which, ſteeped in brandy, is bitter, a ſtrengthener of the ſtomach, and carminative. The latter is found in great profuſion, as well in the ſandy downs near Columbo, as near Mature, and in other places. Its appearance ſufficiently indicates, that it belongs to the *Contortæ*, and is, according to every conjecture, a ſpecies of *Periploca*, whoſe root is poiſonous and a purifier of the blood.

Binnuge is the name given by the Ceyloneſe to a ſpecies of *Ipecacuanha*, becauſe the root of it is a very good emetic, although it differs from the American. I was informed, that it is uſed with ſucceſs in the Hoſpitals at Columbo, Gale, Mature, and Jafna. It muſt be given in rather larger doſes than the common ſort. I was ſhown two ſorts of it: the one was white, and is called *Elle Binnuge*, the other, which is red, is called *Rat Binnuge*. The red is reported to be the beſt. The white has fine ſtringy roots, and the red is ſomewhat thicker. Both are ſpecies of *Periploca*, both creep on the ſandy downs, or twine round the buſhes which grow in the looſe ſand.

The Portugueſe have here, as well as elſewhere, during their reſidence, introduced both the Chriſtian Religion and their own language, of which many remains are ſtill to be met with in every part. Portugueſe, though corrupted, is ſtill ſpoken very univerſally, both among the Malabars

Malabars and others, on the whole of this weſtern ſide of India; and it is almoſt equally incumbent upon a traveller in theſe parts to learn this Portugueſe dialect, as it is to learn Malay in the eaſtern part of India. The Dutch, ſince their arrival, have endeavoured to preſerve the light of the Chriſtian Religion, and for that purpoſe the Company maintains both Churches and Schools for the natives and ſlaves, and Prieſts to inſtruct them, and perform divine ſervice.

Otherwiſe the heathens upon the iſland, like other Eaſt-Indian nations, pay great adoration to their Idol *Budha*, or *Budſo*, whoſe image may not only be ſeen in the churches, but likewiſe often in their houſes. They intitle him *Deani Budu hamdrue*, i. e. *Lord God Budu*. In the churches offerings of all kinds are laid before him, which ſerve the Prieſts for an income, and with theſe offerings they frequently deſignate their wants and neceſſities. When one or more lie ſick in a houſe, they forge thin plates of ſilver, and form of them on a ſmall ſcale one or more human figures, which they preſent on *Budha*'s altar. When any one has a diſorder in their eyes, they make a pair of eyes of ſilver, and ſo in other caſes; but when they in general invoke his aſſiſtance in any thing, they make a repreſentation either of the leaf of the *Ficus religioſa*, or of the fruit of the *Anacardium*, which they believe

to

to be acceptable to this their deity. When the Prieſts have collected a number of theſe offerings, they melt them down again, or ſell them by weight to the Goldſmiths. I had an opportunity of procuring by traffic ſeveral of theſe offerings, as alſo a ſmall one of pure ſilver, repreſenting the houſehold god *Budha*, whoſe unlucky fate it was to be pawned by the proprietor of him to a European. It ſometimes happens that urgent diſtreſs compels them to this meaſure, but afterwards, as ſoon as ever they are able, they punctually redeem ſuch pledges. The Idol is always repreſented ſitting with his feet acroſs, after the Indian faſhion, with one hand paſſed over his head and both hands claſped together forwards, and with long ears, which reach down to his ſhoulders. In the Churches I ſaw this Image made partly of ſtone, partly of wood, and of various ſizes.

The *Moors*, who come hither from the coaſts of the Continent, are tolerably numerous in Columbo, and carry on an extenſive trade. They are for the moſt part tall of ſtature, darker than the iſlanders, and well clad. Their dreſs reſembles nearly a lady's gown, is moſt frequently made of white callicoe, very wide, and gathered up at the waiſt, and is bound round the body with a girdle of white cotton, tied on the right ſide. On the head they wear a turban. Their

ears

ears are commonly decorated with long ear-rings of gold, of various patterns, ſome being plain, others twiſted, others ſet with precious ſtones of a red, blue, or green colour. Some are very large, being a full finger in length; others again are ſmaller. Sometimes one of theſe only is worn in the ear, ſometimes more, even five or ſix together, ſo that with their weight the foramen and tip of the ear are lengthened amazingly, inſomuch that the ear reaches down to the ſhoulders. Many have a ſmall round knobby fruit, which is ſaid to grow upon a holy mountain in the land of *Kaſchi*, ſet in theſe ear-rings. The fruit is called *Uteratie*, and is moſt commonly of the ſize of a ſmall pea, and ſometimes as large as a muſket-ball. Some fancy that they diſcover in the holes and creaſes of this fruit the reſemblance of ſeven faces, in which caſe it is ſaid to be very much valued, and is purchaſed by the Moors of quality and opulence, at the great expence of two hundred rix-dollars. As ſoon as the children are three years old, one of theſe ear-rings is given them by way of ornament. It is properly the rich, who wear a number of rings in their ears, ſo that from the condition, ſize, and number of the ear-rings, one may form an eſtimate of the wealth and opulence of the wearers.

Perſons

Perſons of rank among the Cingaleſe, ſuch as Ambaſſadors and Officers belonging to the Court in Candi, wear long gold chains round their necks, which hang down upon the breaſt and ſtomach. Such had the Ambaſſadors who now came to Columbo, and ſimilar ones are likewiſe given to the Dutch Ambaſſador and his Secretary, by the King, on their arrival at Candi. Theſe chains do not conſiſt of links, but of globules, which are hollow within, and pierced through in every part of their ſurfaces, and woven round with gold-wire, like fillagree-work. Theſe balls are afterwards ſtrung either upon a ſilken cord or gold-wire to any length that is deſired. One of theſe chains, which is very light, well executed and ornamental, coſts, on account of the ſmallneſs of its weight, little more than from twenty or thirty to forty pagods, each pagod being valued at a ducat.

November 4th, I ſet out from Columbo on my road to *Mature*, in company with M. FROBUS, who was to perform the journey thither on the Company's account, in order to ſee after the packing up of Cinnamon at *Barbari*, *Galc*, and *Mature*; in the mean time that M. SLUYSKEN made a journey to *Negumbo*, in order to ſuperintend the packing and exportation of Cinnamon to Europe by the returning ſhips.

The

The journey was performed in a palanquin, which is more open, and differs in ſome reſpects from the Japaneſe norimon, though in moſt particulars it agrees with it. It has a bamboo-pole over the roof, and is carried by ſeveral Moors, who relieve each other on the road. One may both ſit and lie in one of theſe portable chairs. It has at the ends and ſides curtains to keep off the heat of the ſun. It is for the moſt part uſual to travel with ſix or twelve bearers.

Our route went from Columbo to *Panture*, five miles; from thence to *Kaltere*, three miles; to *Barbary*, two miles and a half; to *Wellotte*, one mile; to *Amlagotte*, five miles; to *Hekkede*, three, and the ſame to *Gale*; from thence to *Belligazza*, five miles, and to *Mature*, three miles and a half. The road extended along the coaſt, and was often incommodious and ſandy.

One ſees every where along the coaſt on this ſide, foreſts of Cocoa, which extend as far as from *Negumbo* to *Mature*, and beyond, with trees in the greateſt abundance, and of incredible ſervice to the natives, who make uſe of their fruits. Theſe Cocoa-woods do not however reach far into the interior of the country, but confine themſelves to the coaſt, and love a ſandy-ſoil and the ſea-air; inſomuch, that I have often ſeen Cocoa-trees grow ſo near the ſtrand, that they over-hung the ſalt billows of the ſea, which

watered

watered their feet, and in ſuch bare and naked ſand, that not a ſingle blade of graſs could grow there.

I obſerved in ſeveral places Cocoa-leaves tied round the trees, and in this manner ſupplying the place of ladders, by means of which the natives could climb up, and gather the fruit. Upon ſome trees, one, upon others two of theſe ladders were tied. The ſide-branches of each leaf, which were tied together, made from ten to twelve ſteps. I alſo ſaw in ſome places a rope tied between two Cocoa-trees, upon which the Cingaleſe were able to paſs from one tree to another.

Oxen were uſed in carts, and were very ſmall and lean. Some of them were very little larger than a European calf of two months.

There were no bridges over the rivers, ſo that we were fain to croſs them in boats, which were ſmall, and for that reaſon were tied three together, and covered with planks, ſo as to form a floating-bridge. The rivers were of conſiderable breadth, very deep, and frequently had a ſtrong current.

Jarrak-trees *(Jatropha Curcas)* were planted in ſeveral places, for quickſet hedges.

On the road we met with ſeveral houſes built at the Company's expence, for the purpoſe of baiting and lodging at, and ſometimes theſe

houſes were both large and handſome. Theſe were covered on the inſide under the roof with linen, with which likewiſe the chairs as well as the table were covered on our arrival. Excluſively of this, the room was ornamented with various elegant flowers, ſuch as the *Glorioſa*, *Areca*, *Lycopodium cernuum*, *Ixoro*, &c. Before the houſe itſelf likewiſe divers pillars were erected in two rows, entwined with young Cocoa-leaves, decorated with flowers, and covered with linen. On our arrival before the houſe, a piece of linen was ſpread on the ground, and the palanquin ſet down upon it. After this linen was ſpread out for us to walk upon all the way to the houſe. This honour is commonly paid to the Europeans, when they travel in the Company's ſervice and on its concerns.

On the 5th we arrived at *Caltere*, where a fort is built, in which a Lieutenant commands.

In the afternoon we travelled farther to *Barbary*, whither the Cinnamon is delivered in from all the circumjacent tracts, and where there are ſeveral warehouſes built of ſtone, as well for the purpoſe of ſtoring it, as for the preparation of *Cair*, or a ſort of Cloth, made of the fibres of the Cocoa. Juſt before them, in the harbour, the ſhips are able to anchor and ride in ſafety, at this time, for the purpoſe of taking in Cinnamon.

On the 6th, 319 bales of Cinnamon were ſhipped, among which were ſome of cultivated Cinnamon.

On the 7th, we proſecuted our journey, and arrived *on the* 8th in the evening at Gale, a handſome town, which ſtands upon a projecting angle of a rock, and is ſtrongly fortified.

The water for drinking here is not very ſalutary; it greatly inflates the ſtomach, and occaſions in all probability the diſeaſe in the teſticles and feet, called the Malabar diſeaſe, which is very prevalent in the town, but rarely met with out of it.

On the 9th, we took in our lading of Cinnamon at this place, and in the afternoon proſecuted our journey to *Mature*, where we arrived on the following morning. Here we ſhipped the ſame day 326 bales of Cinnamon in woollen ſacks, over which was afterwards ſewed a cow's hide.

Before the Cinnamon is packed up, it muſt always firſt be examined by Surgeons appointed for that purpoſe, as well by the Surgeon who reſides at the place where the package is made, as by him that accompanies the ſhip. I had very frequently an opportunity, in the courſe of this year, to aſſiſt at this employment, and was obliged afterward, in conjunction with the others, to be reſponſible for the goodneſs of the Cinnamon. From each bundle a few ſticks

are

are taken out, which are examined by chewing, and by the taſte. This office is very diſagreeable and troubleſome, becauſe the Cinnamon deprives the tongue and lips of all the mucus with which they are covered, and cauſes afterwards an intolerable pain, which prevents one from going on any farther with the examination. So that one muſt perform this buſineſs with great caution, and at the ſame time eat a piece of bread and butter between whiles, which in ſome meaſure migitates the pain. It is but ſeldom that one is able to hold out two or three days ſucceſſively.

The ſuperfine Cinnamon is known by the following properties, viz. in the firſt place, it is thin, and rather pliable; it ought commonly to be about the ſubſtance of Royal Paper, or ſomewhat thicker. Secondly, it is of a light colour, and rather inclinable to yellow, bordering but little upon the brown. Thirdly, it poſſeſſes a ſweetiſh taſte, and at the ſame time is not ſtronger than can be borne without pain, and is not ſucceeded by any after-taſte.

The more the Cinnamon departs from theſe characteriſtics, the coarſer, and leſs ſerviceable it is eſteemed; as for inſtance: in the firſt place, if it be hard and as thick as a half-crown piece: ſecondly, if it be very dark or brown: thirdly, if it be very pungent and hot upon the tongue,

with a taſte bordering upon that of cloves, ſo that one cannot ſuffer it without pain, and ſo that the mucus upon the tongue is conſumed by it when one makes ſeveral trials of it: fourthly, if it has any after-taſte, ſuch as to be harſh bitter, or mucilaginous.

Such are the ſorts of Cinnamon, when they are ſelected from the ſtore-houſes, and ſorted for exportation; but the barkers, who examine the Cinnamon-trees in the woods, and ſtrip off the bark, ſpeak of more and different ſorts of Cinnamon, the leaves of which, in their external appearance, bear ſome reſemblance to each other, and are not all uſed indiſcriminately for barking, but are picked and pointed out by thoſe that are judges of the matter. Theſe Cinnamon-barkers are called in the Cingaleſe language *Schjalias*

The ſorts of Cinnamon which the Schjalias reckon, are the following ten:

1. *Raſſe Curundu*, or *Penni Curundu*, i. e. Honey-Cinnamon, which is the beſt and moſt agreeable, and has large, broad, and thick leaves.

2. *Nai Curundu*, or Snake-Cinnamon (*Slange-Canel*), which approaches neareſt to the former, in deliciouſneſs of flavour, (although it does not abſolutely arrive at the ſame degree) and has alſo large leaves.

3. *Capuru*

3. *Cajuru Curundu*, or Camphor-Cinnamon; this ſort is only to be found in the King's lands, and from its root Camphor is diſtilled.

4. *Cabatte Curundu*, that is, aſtringent or auſtere Cinnamon; it has rather ſmaller leaves than the former ſorts. Theſe four ſorts, which are all together from one and the ſame ſpecies of *Laurus cinnamomum*, are nothing more than varieties, nearly reſembling each other, which are diſtinguiſhed by the *Schjalias* merely by the taſte, and are the only ones, which ought to be barked, and indeed can be barked, for good Cinnamon.

The following ſorts, on the other hand, are never barked at all:

5. *Sævel Curundu*, that is, mucilaginous Cinnamon, the bark of which, when chewed, has a mucous ſlimy after-taſte, like a Mucilage. The bark of this is ſoft, and of a fibrous, or ſtringy texture, and not ſo compact nor firm as that of the others: it is likewiſe tough, and bends eaſily, without immediately breaking. This is likewiſe a variety of the *Laurus Cinnamomum*.

6. *Dawul Curundu*, that is flat, or board Cinnamon; which name it bears, becauſe the bark, in drying, does not roll itſelf up together, but remains flat. This ſort is from the *Laurus Caſſia*.

7 *Nica Curundu*, i. e. Cinnamon with leaves which reſembles the *Nicacol*, or *Vitex negundo*,

viz. in being lanceolate, or long and narrow. This ſeems to be a variety of the *Laurus Camphora*.

Beſides theſe ſeven ſorts, they reckon yet three more, which obviouſly differ from the genuine Cinnamon. And indeed one may immediately ſee, that they can in no wiſe with juſtice be reckoned among the Cinnamon-trees. Of theſe I have ſeen one ſort only, viz. the *Thorn-Cinnamon*: the other ſorts are very rare, and are found only in the Emperor's domains.

8. *Caturu Curundu*, i. e. Thorn-Cinnamon (*Dorn Canel*): this is of a quite different genus from the *Laurus*, and the bark has not the leaſt taſte of Cinnamon. The leaves bear no reſemblance to the *Laurus*, and the branches have thorns (*ſpinæ*) upon them.

9. *Mal Curundu*, or Bloom-Cinnamon, and

10. *Tombat Curundu*, i. e. Trefoil-Cinnamon: becauſe the leaves are ſaid to divide towards the top into three laciniæ.

Cinnamon is barked in the woods at two different ſeaſons of the year. The firſt is termed the *Grand Harveſt*, and laſts from April to Auguſt: the ſecond is the *Small Harveſt*, and laſts from November to the month of January.

It is in the woods on the Company's own domains, that the Schjalias ſeek and peel the Cinnamon bark; although it ſometimes happens that they ſteal into the Emperor's woods, and

at

at times go as far as within half a league of Candi, in order to fetch it; but if they chance in the latter caſe to be diſcovered and taken, they muſt expect to have their noſe and ears cut off.

Each diſtrict or hamlet in the Company's dominions, is bound to bark and furniſh yearly a certain ſtated quantity of Cinnamon; whereas the Cingaleſe there have a certain portion of land rent-free, to cultivate and inhabit, with other privileges. Over a certain number of Schjalias are placed other ſuperior officers, who have the inſpection over them and the Cinnamon, and are likewiſe authorized to puniſh ſmall offences. Over all together is placed a European, who is called their Captain (*Hoofd der Mahabadde*, or frequently in common diſcourſe Captain *Cinnamon*), who receives and is anſwerable to the Company for all the Cinnamon. He is likewiſe veſted with authority to try and puniſh offences of a deeper die.

The barking of Cinnamon is performed in the following manner: Firſt, a good Cinnamon-tree is looked out for, and choſen by the leaves and other characteriſtics: thoſe branches which are three years old, are lopped off with a common crooked pruning knife. Secondly, From the twigs that have been lopped off, the outſide pellicle (*epidermis*) of the bark is ſcraped off

with another knife, which is convex on one edge, and concave on the other, with a ſharp point at the end, and ſharp at both edges. Thirdly, After the bark has been ſcraped, the twigs are ripped up longways with the point of the knife, and the bark gradually looſened from them with the convex edge of the knife, till it can be entirely taken off. Fourthly, The bark being peeled off, is gathered up together, ſeveral ſmaller tubes or quills of it are inſerted into the larger, and thus ſpread out dry, when the bark of its own accord rolls itſelf up ſtill cloſer together, and is then tied up in bundles, and finally carried off. All theſe offices are not performed by one ſingle man, but the labour is divided among ſeveral. The Schjalias afterwards deliver the Cinnamon into ſtore-houſes, erected in ſeveral places by the Company, for that purpoſe, whither it is either carried by porters, or, where there are any rivers, tranſported in boats. Each bundle is at this time bound round with three ſlender rattans, and weighs about thirty pounds. In the ſtore-houſes theſe bundles are laid up in heaps, a ſeparate heap for each village, and covered with baſten mats.

When the ſhips are afterwards ready to take in their lading of Cinnamon, it is packed up, after having previouſly undergone an examination. Each bundle is then made nearly of the length

length four feet, and is weighed off to eighty-five pounds neat: although it is afterwards marked and reckoned for only eighty pounds; ſo that five pounds are allowed for loſs by drying during the voyage. Subſequently to its being well ſecured and tied hard round with cords, the bundle is afterwards ſewed up in two ſacks, the one within the other, on which latter are marked its weight and the place, where it was packed up. Theſe ſacks ought not to be made of ſail-cloth, or linen, but of wool, or ſuch as in India bear the name of *Guniefakken*, from which the Cinnamon receives no injury in the tranſportation.

From the ſtore-houſes the ſacks of Cinnamon are carried to the ſhips, and after they have been ſtowed in there with other goods, looſe black pepper is ſprinkled over them, to fill up every hole and interſtice. The pepper, which is of a dry and hot quality, attracts to itſelf, during the voyage, the moiſture of the Cinnamon, and has been found, by theſe means, not only to preſerve the Cinnamon in its original goodneſs, but even to increaſe its ſtrength.

Cinnamon-plantations, towards the end of the ſixth, and beginning of the ſeventh decennium, of the preſent century, have, by the wiſe, provident, and unwearied exertions of Governor FALCK, been eſtabliſhed in ſeveral places, where many thouſands of trees have been reared in ſandy

ſandy ground, which is the ſoil the best adapted of any to Cinnamon. At *Sitawaka*, which lies on the boundaries between the Emperor's dominions in Candi and the territories of the Company, there are very large Cinnamon-grounds, from whence Cinnamon has been already three times barked, and from which likewiſe this year a quantity was ſent to Europe. At *Paſs*, which is a country-ſeat belonging to the Governor, not far from Columbo, and even out before the town and fortreſs of Columbo itſelf, one may ſee ſimilar plantations. At *Kalture* and *Mature* I had now an opportunity of ſeeing with my own eyes exceedingly large plantations of Cinnamon, which had been eſtabliſhed two or three years before. When all theſe and ſeveral more of the ſame kind ſhall have attained their full growth, it will be inconceivably more convenient for the Dutch Eaſt-India Company to fetch their Cinnamon from a garden, where the trees ſtand at proper diſtances and in rows, than for the Schjalias to creep about far and wide in the pathleſs woods to ſeek and procure it. Add to this, that the Cinnamon in the woods is greatly reduced in quantity, compared to former times; which is partly owing to this, that the portions of land which yielded the beſt Cinnamon have been taken for other uſes, and partly, that the Cinnamon-

Cinnamon-trees in the wild foreſts were left without any guard.

November 13th, We ſet out from *Mature* on our return home, and arrived on the 14th, in the morning, at *Gale*.

On the 16th, ſetting out from Gale, we travelled farther on our road homewards, and arrived at Columbo on the 19th following.

After the Cinnamon in Columbo has been packed up, the diſtilling of the oils commence. Oil of Cinnamon, the deareſt and moſt excellent of oils, is diſtilled no where but in the Company's Laboratory in Columbo, from the fragments and ſmall pieces of Cinnamon, which break off and fall from it, during the packing of it. This duſt and refuſe is laid in large tubs, and a quantity of water is poured upon it, ſufficient to cover it completely. In this manner it is left in ſeveral different tubs, which are got ready in daily ſucceſſion, for ſix or eight days together, to macerate. One of theſe tubs commonly holds one hundred pounds weight of Cinnamon-duſt. All this is poured, a little at a time, into a copper alembic, and drawn off with a ſlow fire. The water, called *Aqua Cinnamomi*, then comes over quite white, nearly of the colour of milk, together with the oil, which floats at top in the open glaſs-recipient placed underneath. A tub is diſtilled off every four-and twenty hours.

During

During the whole time of diſtilling, two Commiſſaries, or Members of the Council of Juſtice, are appointed to be alternately preſent, although this is not preciſely the caſe: but they come moſtly every time that the oil is to be ſeparated from the water. Upon this the oil is poured into a bottle, which the Commiſſaries ſeal, and keep in a cheſt, which is likewiſe ſealed by them. In this manner the Apothecary cannot have acceſs to embezzle any, unleſs he takes care to provide himſelf with ſome out of the recipient, before the Commiſſaries attend. I was at great pains to aſcertain, how much oil is procured from a hundred weight of Cinnamon-duſt, but conſtantly without effect; as it is againſt the Apothecary's intereſt to let this be known. Thus much however is certain, that Cinnamon does not yield much oil, in proportion to other ſpices, and that therefore ſuch Cinnamon as is uſeful, cannot be employed for this purpoſe; but only the refuſe, that cannot be ſent to Europe. The oil was ſold here on the ſpot for nine and three-fourths of a Dutch ducat per ounce. It is in the preſent caſe of a pale yellow colour, and not of a dark brown, which it generally is, when extracted from the coarſer kind of Cinnamon. The other parts of the Cinnamon-tree, beſides the bark, are neither uſed for Cinnamon, nor yet for Oil. The wood of the tree is of a looſe and porous texture,

texture, and handsome enough: when sawed into planks, it is sometimes manufactured into Caddies, and the like; but its scent does not secure it from the attacks of worms.

Jan Lopes was the name given to the *Boerhaavia diffusa*, that must not be confounded with the *radix Lopes*, which is brought hither from the Coast of Malabar, and of which this year was sent to Europe by the homeward-bound ships, for the first time, on the Company's account, about three hundred pounds weight.

Moringa-root, with Long Pepper (*Piper longum*) pounded and laid on the part affected, was made use of here as a vesicatory, to raise blisters.

Calaminder was the name given to a sort of wood, which has a very handsome appearance, and of which I saw among the Dutch several elegant pieces of household furniture; as, for instance, Bureaus, Chairs, Tables, Sofas, Boxes, Caskets, &c. These took a polish as smooth as a looking-glass. The wood is so hard, that edge-tools cannot work it, but it must be rasped and almost ground into shape; and indeed it very rarely holds together with any kind of glue. It is exceedingly fine, and at the same time brittle. In the Cingalese language, Calaminder is said to signify a black flaming tree. The heart, or woody part of it, is extremely handsome, with whitish or pale yellow and black or brown

brown veins, ſtreaks, and waves. In the root theſe waves are ſaid to be cloſer and darker: for which reaſon the nearer a piece is taken from the root, the more valuable it is deemed; ſince higher up in the ſtem of the tree, the waves are thinner and paler. The extremities of the tree, to within one-third or half of it, are ſaid to be fit for nothing, but to be thrown away. Ants are ſaid not to damage it at all. I could not get to ſee the tree myſelf; but from the deſcription I received of it, it is very tall, and ſometimes ſo thick that three or four men cannot encompaſs it. From a ſpecimen of the twigs which I ſent ſome Cingaleſe to gather for me in the foreſts, I ſaw that it was a *Dioſpyrus ebenum*, or the ſame tree from which black ebony is procured.

Tame ſerpents are carried about by the Malabars, or Snake-Enchanters, as they are called, who, for a moderate gratuity, make them dance and play all manner of tricks. The owner careſſes them, and often takes them up in his hands, and ſometimes provokes them to bite. When the maſter plays upon a little pipe, the ſerpent rears its head, and twiſts it about in various directions to a regular tune and meaſure. Theſe conjurors ſtroll about the country and in the towns, in the ſame manner as the Germans and Savoyards

ards do in Europe, in order to pick up a livelihood with bears and monkies.

Serpent-ſtones, which were in great repute, as infallible antidotes againſt the bite of Serpents, I made diligent enquiries after, in order to learn the mode of preparing them. Such were frequently brought me, and were kept up for a ſufficient length of time at a high price; ſo that thoſe which I bought up at firſt were well paid; at laſt, after I had reſolved not to purchaſe any more, and other cuſtomers were become ſcarce, I procured them a very cheap bargain; inſomuch that I was afterwards enabled, on my arrival at the Cape of Good Hope, to let my friends have them at a rix-dollar a piece. The ſtone is prepared by art, large, and nearly of the ſame ſhape as a bean, although in ſize and ſhape theſe ſtones are ſeldom found alike. It is moſt commonly roundiſh or ſomewhat inclining to the oblong form, with obtuſe edges, on one ſide as nearly as poſſible flat, and on the other, ſomewhat convex. It is prepared from the aſhes of a certain root, which is burned, and from a particular ſort of earth, ſaid to be found near *Diu*. Theſe two ingredients being mixed together, are burned a ſecond time, and reduced to a dough, which is then moulded into the form of a ſerpent-ſtone, and dried. All have not the ſame colour; thoſe which have been moſt burned, being of a lighter,

lighter, and thoſe which are leſs burned, of a darker grey: moſt frequently they are variegated with black and grey ſpots. The ſtone is pierced through with fine holes, which however may often be ſeen with the naked eye, and it is at the ſame time ſo brittle, that it will fly in pieces, if it be let fall on a ſtone-floor. When a man happens to be bit by a ſerpent, one of theſe ſtones is laid upon the wound, over which it is bound tight, and left there, till all its pores are filled with the extracted poiſon. In this caſe it is ſaid to drop off of its own accord, like a glutted leech; and if it be then ſteeped in ſweet milk, the poiſon is ſuppoſed to be extracted from it; upon which the ſtone may be applied afreſh to the wound, in caſe the patient is of opinion that any poiſon remains behind. They attribute likewiſe here great virtue to this ſtone in malignant fevers, even in putrid fevers, if a ſmall quantity of it, being ſcraped fine, is taken in wine. I was informed that counterfeit ſerpentine ſtones are made in imitation of the real ones, but which poſſeſs no virtue, and therefore great attention ought to be employed in the examination of thoſe which are genuine, and which may be known by the circumſtance of their faſtening on the palate and forehead, when one is warm, and likewiſe that on being put into water, they ſend up in a ſhort time ſeveral ſmall bubbles.

Cocoa-nuts, from the Maldives, or, as they are called, the *Zee-Calappers*, are ſaid to be annually brought hither by certain meſſengers from thence, and preſented among other things, to the Governor. The kernel of this fruit, which greatly reſembles the kernel of the ordinary Cocoa-nut, is looked upon here as a very efficacious antidote. They take of it half or even a whole drachm. It is deemed a ſovereign remedy againſt the Flux, the Epilepſy, and Apoplexy. The inhabitants of the Maldives call it *Tavercare*, and it ſeems to belong to the genus of *Boraſſus*.

From the ordinary Cocoa-nuts, which formed the daily food of the Indians, was preſſed, in many places, a great quantity of oil. The Cocoa-nut was broken in pieces intire and in the ſtate in which it came from the tree, between two cylinders. The oil, as long as it is freſh, is very mild, and is uſed for the table, in lamps, and for various other purpoſes, both by Europeans and Indians. From the fibrous huſk, which invelopes the nut, was generally prepared cordage for ſloops, and other uſes, and even what to me ſeemed very ſingular, ſtrong cables, for the uſe and ſervice of the Dutch ſhips, when they lie in the harbour off this iſland.

The Indians, who have ſuch a number of poiſonous animals, juices, and fruits in their

country, are likewiſe richly provided with antidotes; among which they reckon the *Lignum Colubrinum*, *Ophiorhiza*, *Mungos*, to which the Moors add the *Rhinoceros's-horn*.

The Moors conduct themſelves in the Churches (or *Moſques*) very devoutly and with great decorum. With the moſt exemplary devotion they offer up their prayers, during which I never once ſaw them turn their heads aſide, and ſtill leſs offer to converſe with each other. In this reſpect they might well ſerve as a pattern to Chriſtians, who but too often behave with very little decorum in the houſe of God, and frequently offer up their prayers with ſo little devotion, that a Moor would be apt to imagine, the whole of their divine ſervice to be a mere paſtime.

On account of the extenſive trade which Columbo carries on with the whole coaſt of the Continent, as likewiſe in conſequence of the vaſt numbers of Moors, who reſide here on account of this commerce, I had abundant opportunities of procuring a variety of ſcarce and current Indian Coins.

Among the Cingaleſe Coins was one very remarkable, on account of its form, and it was even ſaid to be current on the Coaſts of Malabar and Coromandel. It was ſtruck, as I was informed, by the Emperor in *Candi*, of various ſizes and value, and was commonly called *Laryn*.

It conſiſts of a ſilver-cylinder, hammered out, which in the middle is bent together, the ends being afterwards turned up like a hook, and the upper end diſtinguiſhed either with certain letters, or ſtars, or elſe with engravings. One of them which I procured by barter, coſt twelve Dutch ſilvers, and another of a ſmaller ſize nine; both of them were of fine ſilver.

In ſome parts of Ceylon was dug up out of the earth itſelf a copper coin leſs than a farthing, but rather thicker, with an impreſſion upon it, and Malabar characters. It was ſuppoſed to be a Malabar Coin, which was formerly current here.

Among the poorer ſort of people were very current Copper Coins of the Dutch Company, of different ſizes, and of that kind which bears upon one ſide the Company's arms.

Otherwiſe the moſt current Coin in traffic between the Europeans and Indians, were *Rupees* of gold and ſilver, and *Pagodas*. The Rupees were here of different ſorts, being ſtruck by ſeveral Princes, and conſiſted of whole, half, and ſtill ſmaller pieces. *Pagodas*, which are ſeldom ſeen in the Eaſtern part of India, were here extremely common. They are, with very little exception, the only Coin which bears any impreſſion, and the gold in them is mixed with a ſmall proportion of copper. They contain,

on the neareſt average, a Ducat, and paſs for two Rix-dollars, one Stiver, Dutch money. On the one ſide they are convex, and on the other ſomewhat flatter, reſembling in appearance a peppermint-drop. One ſide has a figure upon it, and the other ſide; in thoſe which are moſt current in the Dutch Factories, has only ſome emboſſed dots, whilſt thoſe which paſs in trade in the Engliſh Factories, have a ſtar. Great caution is neceſſary not to be impoſed upon with theſe Pagodas, as a great many counterfeit ones are in circulation, and are ſo ſtrongly gilt, that it is difficult to diſtinguiſh them from the true ones, except by the ſound.

A *Pagoda*, with the image of an Elephant upon one ſide, was very ſcarce to be met with. It was ſaid to be of great antiquity, and was larger than the common ſort, and at the ſame time conſiſted of fine gold.

The Pagodas of *Maſſulipatnam*, which are brought hither from Coromandel, where they are current, have three figures upon them, conſiſt of fine gold, and are both in whole pieces, and divided into eighteen parts.

The *Mangalor-Pagodas* are of two ſorts, the one old, having characters on the reverſe, and the other current, with a moon on the reverſe, and ſtamped with two images on the oppoſite

ſide; it is of fine gold, and is met with in whole and half pieces.

The ſmall Coin, for change, which otherwiſe was made uſe of here, and was likewiſe current on the Coaſts of Malabar and Coromandel, conſiſted either in very ſmall gold and ſilver Coin, called *Fanum*, or in copper Coins of various ſizes, which have been ſtruck by the Factories eſtabliſhed by the Europeans.

The *Fanums* were all ſmall and thin, of gold mixed with copper, and of ſilver, ſtruck at ſeveral places, and by different Princes, on the Continent. They were marked with ſeveral lines and dots on both ſides. The value of them varied, according to their different contents and ſize.

Among the copper Coins were ſeveral different ſorts, ſtruck by Dutch, Engliſh, French, and Danes, of various ſizes, thickneſs, impreſſions, and value. Some of theſe were likewiſe ſtruck in ſilver at Madras, Pondicherry, and Tranquebar. To give a minute deſcription of all theſe, would be too tedious and prolix; for which reaſon I ſhall rather reſerve them for a ſeparate Treatiſe on Indian Coins.

Two leaden Coins, ſomewhat larger than the Javaneſe, were likewiſe brought hither from Malabar; one of them with a round, the other with a ſquare hole in the middle.

As were likewiſe two copper Coins, called *Dudu*, or *Baiſa*, with the figure of an elephant on one ſide, the one of a larger, the other of a ſomewhat ſmaller ſize.

The Cingaleſe Ape (*Simia Silenus ?*) is called *Rollewai*, and is kept by many perſons tame in their houſes. He is eaſily tamed. When he ſees any of his acquaintance, he directly comes jumping to him, fawns upon him, grins, and with a peculiar kind of cry teſtifies his joy. He is of a very friendly and gentle nature, and is very loth to bite any one, unleſs he is immoderately irritated. If any one kiſſes and careſſes a child, he ſeeks to do the ſame; if you beat a child in his preſence, he rears himſelf up on his hind legs, grins and howls in a wretched manner, and if let looſe, will attack the party that beats the child. He leaps faſter than he runs, becauſe his hind legs are longer. He eats fruit of every kind, as for inſtance, cocoa-nuts, apples, pears, greens, potatoes, bread, &c. He is very delicate and tender, with reſpect to his tail, which is longer than his body. In ſize he is nearly upon a par with the *Lemur Catta*, or ſomewhat larger. His body is entirely grey; although the colour ſometimes borders more upon black, and ſometimes more upon white, the latter particularly when he is old. His face is blackiſh, bald, and very little ſhaded with hair.

The

The beard upon his chin and cheeks is white, and turned backwards; on the chin and upper lip it is ſhort, but upon the cheeks it is upwards of an inch in length, and ſtands erect towards his ears, which are in ſome meaſure covered with it in front. His hands and feet are blackiſh, and naked; his nails long and blunt; the thumb detached and ſhort. The breech has hard tuberoſities, which are bare. The tail is round, tapering towards the extremity, hairy, and longer than the whole body, ſo that the animal can twiſt it round and hold himſelf by it among the branches of the trees. The tips of the ears are rounded off, almoſt bare of hair, and black. When he ſits down, he always keeps his hands croſſed over each other. I had one on board in my voyage homeward, but could not keep him alive, as he died on our coming into a colder climate, juſt before the Cape of Good Hope; he is exceedingly tender, not being able to ſupport the leaſt degree of cold.

SECOND JOURNEY TO MATURE.

DECEMBER 7th, I made a ſecond journey from Columbo to Mature, at the inſtigation of the Governor, to viſit Count *Rantzow*'s Lady, who

laboured under a ſevere and tedious illneſs. Count *Rantzow* was Comptroller of this Factory of the Company, and ſhewed me great favours during the few weeks of my abode here. I travelled both day and night in a palanquin, borne by twelve ſtout Moors, who ſupported the whole journey, without reſting, ſo that I made the journey in the ſpace of three days.

I daily made excurſions in the vicinity of this place, and as the precious ſtones of the iſland are found and dug up more eſpecially in theſe parts, I procured the proper intelligence, as well concerning the different kinds of them, as the manner in which they are fought for and made uſe of. Several of them are exported to Europe, quite in their rough ſtate, but the major part are poliſhed and ſometimes ſet here, and afterwards ſold in India itſelf. It was generally the occupation of the poorer ſort of Moors to cut and poliſh them, which was done upon a plate of lead, and for a very moderate charge. I purchaſed of the Moors ſuch ſorts as were to be met with, not only in their poliſhed, but likewiſe in their rough ſtate; the latter, in order to be preſerved among other collections of Foſſils. At firſt I was obliged to pay very dear for them, eſpecially as I then had my choice of them, and ſelected them, as I pleaſed; but in the ſequel I found

found that I could procure them much cheaper, by taking them one with another in the lump.

The Minerals and precious Stones which I an opportunity of meeting with and collecting, were the following, viz.

Iron-ore is found interlarded in earth and clay, and that ſometimes to a conſiderable depth under ground. It is melted in crucibles over a fire, which is blown with two bellows. The ſcoria is ſeparated from it with tongs made expreſsly for the purpoſe, and the melted maſs is poured into a mould made of clay, after which it is purified farther, and forged for ſmaller uſes.

Mica (or Glimmer) in large laminated maſſes, is called *Mirinan* by the Cingaleſe. The ſhivers of this are uſed for ornamenting Talpats or Umbrellas, made of large Talpat (*Licuala*) leaves.

Plumbago, called by the Cingaleſe *Kalu Miniran*, is found along with Mica, at the foot of mountains, in clay, and red earth, moſt frequently at a conſiderable depth. Plumbago is ſometimes likewiſe met with by itſelf in a dry ſoil.

Stahlſtein, or cryſtallized Pyrites, which contains a little copper, is uſed for making buttons of.

In Ceylon all ſuch Stones as are tranſparent and ſufficiently hard to take a poliſh by grinding, are called precious ſtones. Theſe are known to the Moors from Malabar and Mogol, as likewiſe to the Cingaleſe and the Dutch that live in their

their country, by the following Dutch, Malabar, and Cingaleſe names:

The *Ruby*, Robyn, Malab. *Elinges Chogeppu*, and Cingal. *Lankaratte*; is a genuine Ruby.

The *Amethyſt*, Malab. and Cingal. *Scuandi*; is a purple-coloured Mountain Cryſtal.

Robals, Malab. *Rauwa*, Cingal. *Rawa*; are ſmall tranſparent Garnets of a dark-red colour.

Hyacinths, which are made to paſs for Rubies.

The *Red Tourmalin*, Malab. *Pani turemali*, Cingal. *Penni turemali*; is a Quartz inclining to a red colour.

The *Blue Saphire*, Malab. *Nilem*, and Cingal. *Nile*; is a genuine blueiſh coloured Saphire, frequently with blue ſpots.

The *Blue Tourmalin*, Malab. and Cingal. *Nile turemali*; is a Quartz, in colour inclining a little to blue.

The *Green Saphire*, in the Malabar and Cingaleſe languages called *Patje*, *Padian*, is a genuine Saphire.

The *Green Tourmalin*, or Matureſe Diamond, Malab. and Cingal. *Patje Turemali*, is a name given both to Chryſolites with tetraedal priſms, and even ſometimes to the Chryſopras.

The *Topaz*, Malab. *Pureſjeragen*, and Cingal. *Puſpheragan*, is a genuine Topaz.

The *Cinnamon-ſtone*, Cingal. and Malab. *Komedegam*, is a fine flame-coloured or yellowiſh-brown Garnet.

The

The *Yellow Tourmalin*, or Matureſe Diamond, Malab. and Cingal. *Kaneke Turemali*, is a Topaz of a greeniſh-yellow colour.

The *White Tourmalin*, or Matureſe Diamond, Malab. and Cingal. *Sudu Turemali*, is a Topaz of a pale yellow colour.

The *White Cryſtal*, Malab. *Wille Palingu*, Cingal. *Sudu Palingu*, is a tranſparent and colourleſs mountain Cryſtal.

White Saphires, or *Water-Saphires*, Malab. *Wille Padjau*, Cingal. *Sudu Padjau*, are ſmall fragments and ſhivers of the moſt tranſparent white mountain Cryſtals.

The *Tariſo*, is a milk-coloured Quartz.

The *Yellow Cryſtal*, Malab. *Manjel Palingu*, Cingal. *Kaha Palingu*, is a lighter coloured ſmoky Topaz.

The *Brown Cryſtal*, Malab. and Cingal. *Tillia Palingu*, is a ſmoky mountain Cryſtal, or a dark coloured ſmoky Topaz.

The *Black Cryſtal*, Malab. *Karte Palingu*, Cingal. *Kallu Palingu*, partly in cryſtals, partly in fragments, is the Electrical Tourmalin of Ceylon.

The *Cat's-eye*, Malab. and Cingal. *Wairodi*, is a Pſeudo-Opal.

The Ruby is more or leſs ripe, which, according to the Indian mode of expreſſion, means, more or leſs high-coloured. The Amethyſt is violet,

violet, but the Ruby is red, and for the moſt part blood-red. The deeper red the colour, the larger the ſtone, and the clearer it is without any flaw, ſo much the greater is its value. However they are ſeldom found here of any conſiderable ſize, for the moſt part they are ſmall, frequently of the ſize of particles of gravel, grains of barley, &c. The higher the colour, the clearer and more tranſparent they are. The unripe are not ſo clear, and ſometimes thoſe that are more ſaturated, are found with ſpots or ſtreaks in them; ſome of theſe latter approach very near to a violet colour. Moſt of them are round and flat, from having been agitated and rolled about in the water; ſome I have found cryſtallized with eight ſides, of which four were broad, and four very ſmall, and terminated by two points, conſiſting of four ſides each. The Moors ſay that theſe approach neareſt to the Diamond in hardneſs, and poliſh them, in order to render them fit for being ſet in rings.

The Amethyſt is, in fact, no other than a violet coloured mountain-cryſtal, which differs very much in the degrees in which it is coloured. Among theſe one finds ſome that are almoſt white, with ſo faint a tinge of violet, that if they were found by themſelves, one would rather take them for mountain-cryſtals, eſpecially one that was no great connoiſſeur in theſe matters. Others are

found

found to be tinged towards one end; others only in the middle, and others again in ſpots and patches, and that in a greater or leſs degree. Some are ſo ſaturated, that, when they lie on a table, they appear almoſt black, and exhibit, when held up to the light, a very beautiful violet colour. Frequently as well the ſpots as the ſtreaks are ſeen to be in ſome parts paler and in others of a more ſaturated colour, in ſpecks and patches. They are of various ſizes, ſeldom ſo large as a walnut, and for the moſt part very ſmall. The larger they are, the paler and the leſs coloured they are, and therefore the leſs valued and eſteemed. The ſmall ones have in general the deepeſt colour, but yet are of no great value, as they furniſh only ſmall ſtones for cutting. The deareſt and moſt valuable are thoſe which are high-coloured, without flaws, and of ſome tolerable ſize. The more ſaturated the colour is in them, the more ripe they are called, and on the other hand unripe, the paler they are. It is beyond a doubt, that theſe were originally in a fluid ſtate, and previous to their cryſtallization, were tinged with a violet colour, which incorporated itſelf either with a part, or elſe with the whole of the fluid. Some are found rounded off at the angles, and by the rolling about in the water have contracted a high poliſh; others are of an irregular figure, broken

on

on every ſide, frequently with deep and large impreſſions; ſome have ſix ſides, and one hexagonal point. Not one was I able to find quite perfect and undamaged. It is very ſeldom that one meets with any which have both their ends; though even in that caſe they have always received ſome damage from external violence. Some have very long violet ſtreaks variegated with ſtreaks of white. The largeſt are generally cut into buttons for waiſtcoats, which, in the Eaſt-Indies, it is much the faſhion to wear of white linen; and thoſe that are of an inferior ſize, are manufactured into jacket and ſleeve-buttons.

The *Robal* is a dark-red ſtone, darker than the Ruby, and not ſo hard. It appears moſt opaque in a lying poſition, when it is highly ſaturated. Theſe are moſtly found in ſmall pieces, which, are rounded off at the angles, and worn ſmooth by friction. They are cut for ſetting in rings, and are frequently expoſed to ſale for Rubies.

Hyacinths are ſmall yellowiſh-brown or reddiſh priſms, which, as well as Robals, are frequently offered for ſale under the denomination of Rubies.

The *Red Tourmalin*, when laid down upon a table or other ſupport, appears dark and opaque, but, being held againſt the light, is of a pale red hue. The largeſt I could procure are of the ſize of a pea, but moſt of them are ſmaller,

about

about the ſize of a grain of rice. Here and there I met with one cryſtallized, but in general they are always damaged and imperfect. They ſeem to have had four ſimilar ſides on their oblong column, and a quadrangular pyramid. Moſt of them are worn ſmooth and poliſhed from their agitation in the water. The colour is in general equally diſtributed in every part, and ſeldom paler or more ſaturated in one place than in another.

The *Blue Saphire* is, as well as other Cingaleſe coloured ſtones, ripe or unripe in different degrees, that is, more or leſs of a deep blue caſt. Sometimes they are ſo pale, that they almoſt exhibit the appearance of water, and it is more ſeldom that they are dark blue. They are however more uniformly coloured than Amethyſts, without ſpots and ſtreaks; although I ſaw one which was quite of a light blue colour at one end, and dark blue at the other. All thoſe which I ſaw had been worn ſmooth by their agitation in the water, into round and various other ſhapes. I have met with one as large as a hazle-nut; but moſt of them are many times ſmaller. They are all made uſe of, when cut, for buttons and rings.

The *Blue Tourmalin* is nothing but a Quartz, with a tinge of blue.

The *Green Saphire* occurs of a bright green, a greeniſh, and a pale whitiſh colour, and is a genuine

genuine Saphire, which, as well as the former, is fit for cutting, and applied to that purpoſe.

The *Green Tourmalin* is of a dark hue, ſometimes bordering a little upon yellow, ſometimes upon blue, ſometimes upon green, and moſt frequently upon black. It is in not a few inſtances tranſparent, in others covered with an opaque ſurface; ſometimes it is totally opaque, like Shirl, of a ſhining and frequently tortuous fracture, with many flaws longways and acroſs. Sometimes it is found in a cryſtallized ſtate, with an oblong ſhaft of four ſimilar ſides, and a quadrangular point, but moſtly occurs worn down and broken in thick or thin pieces of an irregular form, ſometimes as large as a walnut, ſometimes as ſmall as groats. The Green, or Chryſopraſe is beautiful, of a graſs-green colour, clear and tranſparent, and is uſed for cutting. This is the mineral properly called Green Tourmalin, although this name is likewiſe given to ſeveral other ſpecies.

The *Topaz* properly ſo called, occurs moſtly in yellowiſh ſplinters, and is a more or leſs dark genuine Topaz.

The *Cinnamon-ſtone* derives its name from its colour, which in ſome meaſure reſembles the oil drawn from the beſt and fineſt Cinnamon. It is not however always alike, but more or leſs pale, or of a deep orange-colour. One ſeldom finds any of theſe ſtones of a conſiderable ſize, which

which are undamaged; but they are in general, even the ſmall ones, cracked longways and acroſs, which deſtroys their clearneſs, and renders them unfit for cutting. Theſe flaws occaſion it to fall into ſquares and oblique laminæ. Sometimes it reſembles, in ſome meaſure, Gum Benzoe. When cut, it produces very beautiful ſtones, eſpecially for rings, ſtock and other buckles.

The *Yellow Tourmalin* is called likewiſe Tourmalin Topaz, by the Moors, becauſe it ſometimes bears a great reſemblance in colour to the Topaz. In appearance it is very much like Amber. Some are more ſaturated or ripe, almoſt of an orange colour; ſome are of a paler and ſome of a whitiſh yellow. I never ſaw it in a cryſtallized ſtate, but always worn ſmooth, by being agitated in the water, and from the ſize of a grain of rice to that of a pea. They are cut for the purpoſe of ſetting in rings, and are exceedingly handſome.

The *White Tourmalin* is that which is properly called the Matureſe Diamond. It is more or leſs white, almoſt always of the colour of milk, ſo that its tranſparency is not perfectly clear. For this reaſon it is frequently calcined in the fire, in conſequence of which the colour vaniſhes, and the ſtone becomes much clearer, although not perfectly white. It is then enveloped in fine lime, and burned with rice-chaff (oryza).

One often finds pieces which have ſpots or ſtreaks in them. They are moſtly found worn ſmooth by the water, and ſometimes cryſtallized, with an oblong ſhaft, which has four ſimilar ſides and a tetraedral point. It is cut for ſetting in rings, eſpecially for a border round other larger ſtones, and for ſleeve and ſmall jacket buttons. It is among the moſt common ſtones in *Ceylon*, and not extremely dear.

White cryſtal is found here both cryſtallized and worn ſmooth by the water, in uneven, flat, and long pieces, full of pits and hollows. The colour is clear, more or leſs of a watery hue, or ſhining white. The ſmaller pieces I have often ſeen with their column and pyramids. The larger ones have been generally worn ſmooth by agitation in the water. It ſometimes is of the ſize of two doubled fiſts. Of it are cut waiſt-coat and jacket-buttons, ſtones for buttons, for drawers, and for ſetting in ſhoe-buckles, &c.

Water Saphire is the name of a ſtone, which very much reſembles white cryſtal, but, when viewed againſt the light, is both clearer and whiter; it is eſpecially diſtinguiſhable by its hardneſs, in which it ſurpaſſes the Cryſtals. I could never procure any of thoſe which had their ſides and points, but they had always been worn down by the water into ſhapeleſs pieces, or elſe flat and rounded off, with a rugged ſurface, full of

ſmall

ſmall impreſſions like dots. The largeſt I ſaw had been of the ſize of a walnut. They are much dearer than Cryſtals, and are cut for waiſtcoat and jacket-buttons, and for ſhoe-buckles.

Tarijo is the name given in Ceylon to a white ſtone, which in all probability is nothing more than a Quartz or white Cryſtal. Its colour is pure white, or ſomewhat of a watery caſt, but not ſo clear and tranſparent as the Cryſtal, but rather like a Quartz. I have never ſeen it cryſtallized, but always in ſhapeleſs lumps. Of theſe likewiſe ſtones are cut for ſetting.

The *Yellow Cryſtal* is probably the ſame as the white, only with this diſtinction, that it appears of a diſagreeable yellowiſh colour. I never ſaw it cryſtallized, but always worn down ſmooth by the agitation of the water into round pieces, with a rough knobby ſurface.

The *Brown Cryſtal* diſtinguiſhes itſelf from the former merely by its being of a blackiſh caſt, or of the colour of pale ink. When laid down upon any ſubſtance, it does not ſeem to be tranſparent, but may be ſeen through, if viewed againſt the light. The ſpecimens I ſaw were always rounded off in pieces as large as a large hazle-nut or ſmall walnut, in conſequence of the agitation they had undergone in the water. The ſurface is rough, in conſequence of the fine dots impreſſed on it, and a grey cruſt, which ſome-

times renders it impervious to the light, when in its intire ſtate, although the inſide is tranſparent, as appears when the ſtone is broken in pieces. It is cut into buttons for drawers, and other uſes.

The *Black Cryſtal* is a quite black, ſhining, but not tranſparent Shirl. It is often found broken into ſhapeleſs pieces, round or oblong, being worn ſmooth by agitation in the water. It is of a ſhining fracture, and falls into ſlate-like ſhivers, which are tranſparent at the edges. Of this I have ſeen pieces as large as a walnut, and others quite ſmall, like a pea. Some I was able to meet with, which were cryſtalline, although not altogether undamaged, with ſix diſſimilar ſides and an obtuſe triangular point. They are cut and poliſhed for buttons, which are worn upon jackets and upon the clothes of thoſe who are in mourning. They bear a great reſemblance to canel-coal buttons. This Cryſtal is very common, and not of any great price or value. I could not obſerve, that the Indians were acquainted with its electrical properties, which they never denote by the name of Tourmalin, but beſtow that denomination upon ſeveral other ſpecies.

Cat's-eye is the name given to a very hard ſtone, which approaches more or leſs to white or green, and is ſemi-diaphanous, with a ſtreak of the

the breadth of a line in the middle, which ſtreak is much whiter than the ſtone itſelf, and throws its light to what ſide ſoever this is turned. In this reſpect therefore it reſembles a cat's eye, whence it derives its name. The largeſt I ſaw was of the ſize of a hazle-nut, others are found much ſmaller. In its rough ſtate it ſeems to have no angles nor ſigns of cryſtallization. Its value is in proportion to its ſize and purity. One of the ſize of a nut, without flaws and other imperfections, is ſometimes valued at fifty or ſixty rix-dollars and upwards. They are cut convex and oblong, without faces, ſo that the ſtreak, which interſects them, comes in the middle, and they are afterwards ſet in rings, which are worn by the Malabars and Moors.

From theſe deſcriptions it may be ſeen, that the ſtone known in Europe, under the name of Tourmalin, and celebrated for its electrical virtues, is not known by the ſame name to the Indians; but that they denote by the word Tourmalin, ſeveral ſtones, which poſſeſs no electrical properties and which are even of different ſpecies, of different colours, and of different degrees of tranſparency.

Moſt of theſe ſtones I ſhewed to Profeſſor BERGMAN, who very kindly furniſhed me with their mineralogical names.

It is chiefly the Moors who ſell theſe ſtones in Columbo, Gale, and Mature, both in their rough ſtate, and after they have been poliſhed and ſet; but a ſtranger ought to be very cautious how he deals with them; as well becauſe they are apt to aſk extravagantly more than the ordinary price, as alſo becauſe they often impoſe upon the purchaſer with glaſs-fluors and ſtones cut by them, which they manage with ſuch art and dexterity, that one that is not uſed to them is eaſily duped.

All theſe precious ſtones, which are found in Ceylon, more eſpecially occur in the region round Mature, in the vallies and at the foot of the mountains, in a compound of earth and fat clay. Several different ſorts are found in the ſame ſoil and the ſame place. Sometimes they are found likewiſe upon the ſurface of the earth, when they are waſhed off from the mountains by a violent rain or a ſtrong current of water.

In ſome places one finds ſtones without much trouble, at the depth of one, two, or three feet beneath the ſurface, whilſt, on the other hand, in other places, one muſt dig to the depth of twenty feet and more. When one is within the reach of water, the work goes on much eaſier, becauſe the waſhing can then take place upon the ſpot; the earth dug up being put into a large rattan baſket, which is kept in water, that the earth may be ſeparated. For this reaſon, thoſe

pits

pits which lie near rivulets, though they are not the richeſt, are conſidered as the leaſt troubleſome.

The digging of precious ſtones in the circumjacent diſtrict of Mature is farmed out annually in the month of Auguſt, to the higheſt bidder, on account of the Dutch Eaſt-India Company. In 1777 and 1778 a Moor is ſaid to have farmed it for 180 rix-dollars. The land farmed out for digging does not always lie in one contiguous ſtretch or tract, but different ſpots, ſcattered up and down in different parts, are ſought out, which are found to contain ſtones. Before they are farmed out, theſe ſpots are inſpected by Commiſſioners on the Company's account. To ſuch portions of land appertain frequently the gardens of the Cingaleſe, which in this caſe are not free to be dug. One and the ſame tract of land can be hired out, and conſequently dug ſeveral times. In general and chiefly ſuch plots of ground are choſen for this purpoſe, as lie contiguous to mountains, and more eſpecially to rivulets, on account of the waſhing. Afterwards the Farmer-General frequently ſells licences to ſeveral others to dig with a certain number of men; for inſtance, for fifteen rix-dollars, to thoſe who employ ten men, and ſo in proportion for five or twenty men. Theſe have the privilege of digging the whole year, and

wherever they pleaſe, but not with more men than they pay for to the Farmer-General. Thoſe who purchaſe the privilege of digging, have, excluſive of this, to pay their diggers themſelves. What is got every month after digging and waſhing, is put into a bag, which is ſealed up and ſent home to the Proprietor, who then has to ſelect and arrange the ſtones, which, with more or leſs profit to himſelf, he has been able to acquire.

The *Ficus Religioſa* is called by the Dutch *Duyvel's-boom*, or Devil's-tree, and by the Cingaleſe *Boga*. The latter regard it as a ſacred tree, becauſe they believe that the God *Budu* repoſes under it; for which reaſon they never fell one of theſe trees, but, on the contrary, make their moſt ſolemn vows under it. Whenever they have taken an oath, or entered into any covenant under ſuch a tree, one may reſt aſſured of their obſervance of it.

Leeches *(hirudines)* are found in abundance in the woods, eſpecially near the ſummit of a mountain. Theſe are of a reddiſh brown colour, of the thickneſs of a knitting needle, and an inch in length. When one is walking in theſe places, they faſten on the feet, and can ſuck out the blood through two pair of cotton ſtockings Count RANTZOW informed me, that a European on whom one of theſe leeches had faſtened, pulled

pulled it forcibly off, and afterwards loſt his life in conſequence of that, and a neglect in the cure.

The *Hyſtrix* (or Porcupine) is found in plenty in the woods, and the Dutch frequently hunt this animal with dogs. His ſharp quills faſten in the bodies of the dogs, when they ruſh too eagerly upon him, ſo that it is not uncommon for them to loſe their lives in the purſuit. The animal makes its abode and burrow in the ground, the entrance to which is no larger than to admit a moderate-ſized hunting-dog to creep into it, and drive the animal out at another aperture of the ſame burrow. The *Hyſtrix* has frequently Bezoar-ſtones in its ſtomach, which here, ſcraped to a fine powder, are adminiſtered in all kinds of diſorders. Theſe ſtones conſiſt of very fine hair, which has concreted with the juices of the ſtomach, and have one layer over the other, ſo that they conſiſt of ſeveral rings of different colours. I have ſeen them of the ſize of a hen's egg, moſt commonly blunt at the end; but one I had an opportunity of ſeeing, which was as large as a gooſe's egg, perfectly globular, and all over brown.

I was informed, that the *Hyſtrix* has a very curious method of fetching water for its young, viz. the quills in the tail are ſaid to be hollow, and to have a hole at the extremity; and that the animal can bend them in ſuch a manner, as that

that they can be filled with water, which afterwards is discharged in the nest among its young.

Scorpions abound here in great numbers, although it is seldom that any detriment is experienced from them. When it rains, one may often see these animals, as well as the *Scolopendra morsitans*, sally forth from their hiding-places, and creep in shoals into those houses, the doors of which are left open on account of the heat.

The Stink-tree was called by the Dutch *Strunt-hout*, and by the Cingalese *Urenne*, on account of its disgusting odour, which resides especially in the thick stem and the larger branches. The smell of it so perfectly resembles that of human ordure, that one cannot perceive the smallest difference between them. When the tree is rasped, and the raspings are sprinkled with water, the stench is quite intolerable. It is nevertheless taken internally by the Cingalese, as an efficacious remedy. When scraped fine, and mixed with lemon-juice, it is taken internally, as a purifier of the blood in the itch, and other cutaneous eruptions, the body being at the same time anointed with it externally. I was at great pains to procure some blossoms of this tree, in order to ascertain its genus, but was constantly disappointed. Of the Cingalese, whom I sent out for that purpose far up the country into the woods, I could only obtain some branches without

without any bloſſom, from which, however, I could perceive, that the tree was neither the *Anagyris fœtida*, nor the *Sterculia fœtida*. I had likewiſe ſet ſome live but ſmall plants of this tree in boxes, and carried them with me alive quite to the Engliſh Channel, where they were totally deſtroyed, together with ſeveral other ſcarce trees and plants, by cold and ſtorms. Of the wood I carried with me ſome pieces to my native country, which, however, afterwards loſt their ſcent to that degree, that now not the ſmalleſt traces of it can be perceived.

Another kind of tree was called the *Serpent-tree*, by the Dutch *Slangen-hout*, and by the Cingaleſe *Godagandu*, which had a very bitter taſte. It was not only uſed as an efficacious antidote againſt the bite of Serpents, but likewiſe in ardent and malignant fevers. The Europeans have cups turned of the wood, into which wine is poured, which, in a ſhort time extracts the virtue from the wood, has a bitter taſte, and is drank as a ſtomachic, or ſtrengthener of the ſtomach. Water likewiſe extracts a green tincture from it. Moſt probably this tree is the *Ophioxylon Serpentinum*, which grows here, although I had no opportunity of ſeeing any of the flowers. The wood itſelf reſembles that of the Oak, by its grey colour, and numerous ſmall

pores, which, in the cups that are turned from it, frequently let the water filter through them.

The Shingles (*Herpes*) are cured here with the Capſules of the *Hibiſcus Tiliaceus*, by rubbing the juice of them over the eruption. This beautiful tree is planted at Columbo and other places, in alleys, continues in bloom for ſeveral months together, and with the varying hues of its lovely bloſſoms is a great ornament and embelliſhment to the ſpot.

From the root of the *Caſuru Curundu*, Camphor is ſaid to be diſtilled in Candia, which is the capital of the iſland, and the reſidence of the Emperor of Ceylon. It is ſituated upon an eminence, almoſt in the centre of the country. Not far off ſtands a very high mountain, which rears up in the air a ſtill higher ſummit. The mountain bears the name of *Adam's Mountain*, and the ſummit is commonly called *Adam's Peak*, where Adam, the father of the human race, is ſuppoſed to lie buried. The Cingaleſe make pilgrimages to this place, and pretend that the impreſſion of Adam's foot is ſtill to be perceived in the mountain.

The *Ophiorhiza Mungos*, called *Mendi*, is uſed by the Indians againſt the bite of Serpents. The leaves and bark are ſaid to be boiled and taken in the form of a decoction.

The

The *Ophioglossum scandens*, a creeping plant, that twines round the trees, is here made use of in several places as a substitute for Ivy, to cover pales and garden-fences with, and defend them against the sea-wind. The pales are covered with it on the outward side, and consist themselves of nothing more than a number of small stakes driven into the earth, close to each other.

I saw *Cocoa-trees* also stuck in the water, like poles, and was told, that they would last a whole century, without going to decay, although this appeared to me incredible.

The *Sciurus Ceilanicus* was not scarce, but kept by several people in their houses tame in a cage. It is called by the islanders *Rockia*, or *Ruckia*, and is black on the back and sides, and yellowish under the belly. The tail is likewise black, and longer than the body. This Squirrel, which at this time was altogether unknown in Europe, and has since been described by Mr. PENNANT, is very easily tamed, and is as large as a cat, but more slender in the body.

On the 28th I travelled from *Mature* back again to Columbo, in company with the young Count RANTZOW, who was now going on a visit to his brother, and sailed as Gunner on board a Dutch ship. This youth, who was of a very hasty disposition, had, at the same time, the misfortune to be lame in his feet. Notwithstanding this defect,

defect, he had learned to fence with great ſkill, and, in ſpite of his crooked legs and thighs, to dance incomparably well. We arrived in ſafety at Columbo, on the evening of the new year.

Soon after the new year, according to annual cuſtom, three Ambaſſadors from the Emperor in Candi, arrived in Columbo. Theſe were received on the part of the Company by Deputies at *Situvaka*, and, the uſual ceremonies of congratulation having paſſed, were conducted to the old Town, without the fortifications, where they were quartered, and remained, till the day appointed for public audience.

February 5th was fixed for ſending an Embaſſy to the Emperor, on part of the Company, which Embaſſy conſiſted of a Merchant and two Clerks.

About this time was celebrated with much pomp and rejoicing, the inſtallation of the Governor-General, in Batavia, in his high office, intelligence of his nomination having arrived from Europe. The joy of the day was teſtified by the diſcharge of cannon from the ramparts and the ſhips, and the evening was ſpent in dancing and diverſions, with a public ſupper in the Governor's palace, to which all the public Functionaries and naval Officers were formally invited, together with the Ladies of diſtinction in the town.

Among

Among the various kinds of Cottons and Chintzes, which are brought hither from Coromandel, thoſe appear to me to merit the preference, which come from Suratte and Bengal, of which the latter ſeem to be the moſt beautiful. From *Tutucorin* I ſaw likewiſe ſome which were not printed, but had flowers painted upon them with a hair-pencil, after the manner of Tapeſtry. It is incredible to what a degree of fineneſs Cotton is ſometimes ſpun upon the Indian coaſt. I had an opportunity of ſeeing Cotton-ſtuffs ſo exceedingly fine, that half a dozen ſhirts could be ſqueezed together in one hand. Theſe are however not readily made uſe of, but are kept as rarities by people of diſtinction, to ſhew to what a degree of perfection the art of ſpinning can be brought.

Some differences had ariſen on the coaſt of Malabar, which obliged the Governor to ſend ſome troops from this place to Cochin. And as preparations were now making for this purpoſe the Governor was pleaſed to propoſe to me to make a journey to the Continent of Africa with this expedition, although the ſhip in which I had come hither lay ready to ſail on her return to Europe. But as I had already in Batavia formed the determination to reviſit Europe, I requeſted, inſtead of the proffered favour, his Excellency's kind permiſſion to exchange my

place

place with another ſhip's Surgeon, and to remain ſtill a month longer upon this beautiful iſland, and by this means to have an engagement on board one of the ſhips, which were to ſail from hence in February; which requeſt was graciouſly accorded me.

January 17th, 1778, I undertook a journey, in company with Meſſrs. SLUYSKEN and CONRADI, to *Negumbo*, at which place we arrived the following day. This is a ſmall fortified place, with a gate of brick-work, and ramparts of earth, where an Enſign is ſtationed in quality of Commandant.

On the 19th, a quantity of Cinnamon was packed up, during which time, in company with a Cingaleſe, I undertook a journey on horſeback ſomewhat further up the country, to ſee an *Elephant-toil*, or ſnare, which ſerved for capturing and incloſing a great number of Elephants. The toil was conſtructed of ſtout Cocoa-trees, almoſt in the form of a triangle, the ſide neareſt to the wood being very broad, and augmented with ſlighter trees and buſhes, which gradually expanded themſelves into two long and at length imperceptible wings. The narrower end was ſtrongly fortified with ſtakes, planted cloſe to each other, and held firmly together by ropes, and became at length ſo narrow, that only one ſingle elephant could ſqueeze itſelf into the opening.

opening. When the Governor gives orders for an Elephant-chace on the Company's account, which happens at the expiration of a certain ſtated number of years, it is performed in the following manner: a great multitude of men, as well Europeans as Cingaleſe, are ſent out into the woods, in the ſame manner in which people go out on a general hunt for wolves and bears in the North of Europe. Theſe diffuſe themſelves, and encompaſs a certain extent of land, which has been diſcovered to be frequented by Elephants. After this, they gradually draw nearer, and with great noiſe, vociferation, and beat of drum, contract the arch of the circle; in the mean time that the Elephants approach nearer and nearer to the ſide on which the toil is placed. Finally, torches are lighted up, in order to terrify ſtill more theſe huge animals, and force them to enter into the toil prepared for them. As ſoon as they are all come into it, the toil is cloſed up behind them. The laſt time that Elephants were caught in this manner, their number amounted to upwards of a hundred, and on former occaſions has ſometimes riſen to one hundred and thirty.

The major part of the Elephants, which are caught in the manner related above, are afterwards ſold at Jafnapatnam, to the Princes of Coromandel. So that the firſt care of the cap-

tors is, to bring them out of the toil, and to tame them. For this purpoſe one or two tame Elephants are placed at the ſide where the opening is, through which each Elephant is let out ſingly, when he is immediately bound faſt with ſtrong ropes to the tame ones, who diſcipline him with their proboſces, till he likewiſe becomes tame, and ſuffers himſelf to be handled and managed at pleaſure. This diſciplinary correction frequently proceeds very briſkly, and is ſometimes accompliſhed in a few days, eſpecially as the wild Elephant is at the ſame time brought under control by hunger. After theſe large and powerful animals have been in this manner brought forth and tamed, it remains to view and meaſure them; which latter operation is performed in a place paved ſmooth and even with corals; on this they are arranged in due order, and meaſured with a long rod, by a man who rides between their ranks, ſitting upon a tame Elephant. The review and examination of them extends over the whole body, in order to diſcover whether they have any natural or acquired blemiſh. After this a deſcription is drawn up, expreſſive as well of the height as of the blemiſhes of each, and according to the ſize and perfections of the animal is its value eſtimated. The meaſure is computed by *Covidos*, three of which conſtitute four feet. The admea-

admeaſurement is made from the ground to the ſhoulder-blade; and in general an Elephant ſtands ten *Covidos*, or about fourteen feet high. A tame Elephant is commonly ſold for 200 rix-dollars; but if it has any blemiſh, for inſtance, if its tail has been plucked off, one of its ears ſlit, if ſome of the nails be wanting on its feet, or if it has ſuffered any other kind of damage, they deduct from the purchaſe-money for every defect, from 50 to 60 or 80 rix-dollars, according to the different nature and importance of the blemiſh. And as it is very rare to find an Elephant free from every kind of blemiſh, thoſe that are ſo, are moſt commonly ſold for from 500 to 1,000 rix-dollars. When the time arrives for holding the auction, it is cuſtomary for two, three, or more perſons, to purchaſe conjointly 50, 60, 80, or 100 Elephants, which they afterwards diſpoſe of in ſeparate lots, with great profit. Previous to the ſale, the Elephants are marked on the rump with the Company's arms. For this purpoſe the animal is bound faſt to a ſtrong tree, and burned with red-hot iron.

The Elephant is inconteſtably one of the moſt ſagacious and gentle animals in nature, an animal which, notwithſtanding its unparalleled ſize and ſtrength, very readily ſuffers itſelf to be tamed, and trained to various uſeful ſervices. When he is brought into trouble and diſtreſs, he

whines almoſt like a child, and learns, when tamed, in a very ſhort time, to underſtand what is ſaid to him. When he is firſt caught, he pines away with grief and anxiety, eſpecially if he was tame before, and has had a good maſter. It ſometimes happens, at ſuch a hunt as I have juſt deſcribed, that tame Elephants, belonging to the Emperor in Candia, and which have been turned looſe to graze in the woods, are caught with the reſt. In this caſe it is often impoſſible to prevail with them, whilſt they are in the toil, to eat or take any kind of nouriſhment, before the arrival of the ſervants who are accuſtomed to tend them, whom they not only recognize, but, when let looſe, follow. The Elephant is very fond of the fruit of the Piſang-tree, as likewiſe of Cocoa-nuts, whether theſe are given him broken or whole, and in the latter caſe he cracks them himſelf. The young ſucks the dam with the mouth, and not with its trunk, and many experiments made by M. SLUYSKEN have aſcertained its daily proportion of drink to be commonly forty-five gallons of water. The females, when tame, are ſometimes employed to catch wild Elephants, for which purpoſe they are turned looſe in the woods, and from hence allure the wild males to ſome toil, where they can be incloſed. Males, caught in this manner, I have more than once ſeen bound to a large and ſtout

tree,

tree, and at the expiration of a few days become tame. The male Elephants, which the Dutch make uſe of to diſcipline and tame the wild ones they have captured, are commonly called Kidnappers *(Zeelverkooper)*. When an Elephant has once been properly tamed, he may be governed even by a child, and does not willingly injure any one, provided he is not ill treated, and thereby ſpurred on to revenge. I have frequently ſeen him bend one of his legs, in order to let his rider climb up by it, as it were by a ſtep, on his back, and likewiſe take up little boys very carefully with his trunk, and place them upon his back, and take them down again. The Dutch Eaſt-India Company make uſe of Elephants every where to tranſport beams and other heavy articles, as likewiſe for carriages and large carts. When he is harneſſed to any ſuch vehicle, a ſtrong rope is always bound round his neck, to which another ſtrong rope is faſtened on either ſide, which runs along the ſides near the back, and is made faſt to the tackling of the carriage. In caſe two Elephants are harneſſed to the ſame carriage, a pole runs between them. When the Elephant moves, one may clearly perceive, that he bends the knee-joint, notwithſtanding that the whole leg otherwiſe appears to be of an equal thickneſs, and inflexible. The proboſcis is not only a great ornament to this.

ſtately animal, but at the ſame time one of its moſt neceſſary inſtruments, for gathering in its food, drinking, and laying hold of all ſorts of things; for which reaſon he is very careful of it, and will upon no account ſuffer any ant to come upon it.

The Elephant is never, or at leaſt very ſeldom, ſhot in this country, as they prefer catching it alive; neither does one find here any great Elephant-hunters. I was informed that upon a female, which was bound faſt to a tree, thirteen ſhot were fired from a common muſket, before ſhe fell. The reaſon for killing her was, for the ſake of cutting out the fœtus, with which ſhe was pregnant, in order to ſend it, preſerved in arrack, to his Royal Highneſs the Hereditary Stadtholder's Collection of Natural Curioſities at the Hague. That the wild ones in the woods, however, are ſometimes fired upon, ſeems evident from a circumſtance, of which I was informed by M. Frobus, viz. that he had ordered one of the teeth of an Elephant, that had been caught, to be ſawed through, in which he found a common leaden bullet, which had lodged in the tooth, and in proceſs of time was ſo totally incloſed and covered over, that externally no marks of it could be perceived. This tooth he ſent likewiſe, in the year 1765, to the above-mentioned Collection at the Hague. As the Ceyloneſe Elephants

phants are ſo eaſily caught and tamed, it ſeems extraordinary, that many obſtacles ſhould lie in the way of thoſe that make ſimilar attempts at the Cape in Africa. And yet, in 1775, ſhortly before my departure from thence, a young one had been taken alive, after the dam was ſhot, and the attempt was made, though without ſucceſs, to rear it. It had need of the milk of three cows daily for its ſupport, but could not be preſerved alive.

After I had minutely examined the large and extenſive toil, which was conſtructed for the capture of ſuch a conſiderable number of theſe large animals, I returned back to the companions of my journey, and arrived at *Negumbo* towards evening. In the way I had the pleaſure, which I now leaſt expected, to find that beautiful plant, the *Burmannia diſticha*, which I had for the ſpace of five months both ſought for diligently myſelf, and likewiſe exhorted many of the Cingaleſe to look out and procure for me. It grew in the low lands, and places in the woods that were ſtill covered with water, and had lately began to expand its blue flowers. I gathered as much of it as was to be found in this place, and laid it up to dry, as well for my worthy patron and benefactor, Profeſſor BURMANNUS, as for others of my much loved and truly reſpectable friends in Europe. It is called by the Cingaleſe *Wilende Wenne*.

We travelled in the delightful cool of the ſame evening to Columbo, where we arrived on the 20th of *January*, about noon.

Here I met with (and purchaſed for twelve Pagodas) a Bezoar-ſtone, which was repreſented as very ſcarce, and the largeſt of the kind ever found in the gall-bladder of the *Simia Silenus* above-deſcribed. It was commonly called *Ape-ſtone*, was ſmooth on the outſide, and is now preſerved in the Collection of Minerals belonging to the Univerſity of Upſal.

I had obſerved ſeveral times, as I went in and out of the gates of the fortifications, that a ſoldier, who preſented his arms to me, as I paſſed him, as is uſually done to Naval Officers, looked at me with particular attention. This induced me to aſk him what country he was of. He then informed me that he was a Swede, that his name was Bolin, and that he had been a Notary in ſome College in Stockholm, but being obliged by misfortunes to quit his native country, he had ſailed out in the capacity of a ſoldier, and had ſpent ſeveral years in theſe parts, without having met with any encouragement or farther advancement. As ſoon as I had informed myſelf more circumſtantially concerning this man, and had learned that he wrote a good hand, and underſtood ſomething of book-keeping, and that he was content to ſail to Batavia, I ſolicited this

this favour for him of the Governor, who very readily gave his conſent. Furniſhed with my recommendation to Counſellor RADERMACHER and Captain WIMMERCRANTZ, he ſoon after ſet ſail, and arrived in ſafety at the place of his deſtination. The former of theſe gentlemen promoted him immediately to the poſt of Clerk, and ſoon after to that of Principal Accomptant; the latter, with his wonted partiality to his countrymen, received him into his houſe, and as long as he lived, rendered him the moſt eſſential ſervices, which gives this gentleman, who is now returned to his native country, a juſt claim to our thanks and eſteem.

The Coffee-plantations in Ceylon reſembled thoſe which I had ſeen in Java, with this difference, however, that here a large tree of the *Bigonia* genus was planted between the Coffee-ſhrubs, in order to afford them a thin ſhade, and ſcreen them with its crowns, from the exceſſive heat of the ſun. The Coffee-beans which are cultivated in this place, are ſaid not to be equal in quality to thoſe that are produced in Java.

Rice is cultivated in this iſland, as well as on the coaſts of Coromandel and Malabar, but not in ſuch quantity as to afford theſe places a ſufficient ſupply. On the coaſts of India abovementioned, the crops ſometimes, as I was informed, turn out ſo exceedingly bad, and in conſe-

conſequence of this ſuch a dreadful famine enſues, that, on the coaſt of Malabar eſpecially, parents are forced to ſell their children for ſlaves, for one ſingle ſolitary buſhel of rice, or elſe to give them up to ſlavery without any compenſation, that they may not ſee them ſtarved to death before their eyes.

Cardamoms were brought me, which were ſaid to be cultivated in the internal part of the country. They were triangular oblong capſules, nearly an inch in length, and conſequently quite unlike thoſe which grow in the iſland of Java. A flower of them I could not procure, to enable me to aſcertain their genus; but I imagine, that they were the ſeed-veſſels of ſome ſpecies of the *Alpinia*.

Gum Lack was very plentiful on the ſhrubs of the *Croton lacciferum*, which grew in abundance in the ſand-pits without Columbo, and other places. It was ſometimes uſed here for lacquering, after being diſſolved in ſpirits of wine.

Both on the coaſt of the Continent of Aſia, and the iſland of Ceylon, the leaves of the Boraſſus Palm-tree (*Boraſſus flabelliformis*) and ſometimes of the Talpat-tree (*Licuala ſpinoſa*) are uſed inſtead of paper, which the Indians do not prepare from the bark of a tree, as their neighbours more to the eaſtward do. The leaves of both theſe Palm-trees lie in folds like a fan, and the ſlips ſtand in need of no farther preparation than merely

merely to be ſeparated and cut ſmooth and even with a knife. Their mode of writing upon them conſiſts in carving the letters with a fine pointed ſteel (*ſtylus*). And in order that the characters may be the better ſeen and read, they rub them over with charcoal, or ſome other black ſubſtance, ſo that the letters have altogether the appearance of being engraved. The iron point made uſe of on theſe occaſions is either ſet in a braſs handle, which the Moors and others carry about them in a wooden caſe, and which is ſometimes ſix inches in length; or elſe it is formed entirely of iron, and, together with the blade of a knife, deſigned for the purpoſe of cutting the leaves, and making them even, ſet in a knife-handle, common to them both, into which handle it ſhuts up, ſo that it may be carried by the owner about with him, and be always ready at hand. On ſuch ſlips are all letters, all Edicts of Governors, &c. written, and ſent round open and unſealed. When a ſingle ſlip is not ſufficient, ſeveral are bound together by means of a hole made at one end, and a thread, on which they are ſtrung. If a book is to be made, either for the uſe of the Churches or any other purpoſe, they look out principally for broad and handſome ſlips of Talpat-leaves, upon which they engrave the characters very elegantly and accurately, with the addition of various figures

figures delineated upon them, by way of ornament. All the ſlips have then two holes made in them, and are ſtrung upon an elegantly twiſted ſilken cord, and covered with two thin lacquered wooden boards. By means of the cords the leaves are held even together, and by being drawn out, when they are wanted to be uſed, they may be ſeparated from each other at pleaſure. One of theſe books, ſaid to contain various prayers, I had an opportunity of purchaſing from a Prieſt in Ceylon, by the intervention of Count RANTZOW.

The leaves of the Boraſſus, which is a very common Palm-tree in this iſland, are beſides uſed for Fans, both here and in other parts. The Palm Licuala, which is ſcarcer, produces very large leaves, and rivals in this reſpect the Cocoa-tree itſelf. Theſe which lie in folds, are divided towards the point, and are here commonly uſed as Paraſols, for a defence againſt the ſun, and as Parapluyes to defend them from the rain. One of theſe leaves, cut off about five feet in length, and of almoſt the ſame breadth, decorated with various elegant embelliſhments, bears, like the tree itſelf, the name of Talpat, and is carried over the heads of people of diſtinction, both Indians and Europeans, by a ſlave, inſtead of the common Paraſols and Parapluyes. One ſingle leaf is generally large enough to ſhelter

this a mistake — for the Corypha [illegible]

ſhelter ſix perſons from the rain. This beautiful Palm-tree grows in the heart of the foreſts, but is ſcarce. It may be claſſed among the loftieſt trees, and becomes ſtill higher, when on the point of burſting forth into bloſſom from its leafy ſummit. The ſheath, which then envelops the flower, is very large, and, when it burſts, makes an exploſion like the report of a cannon; after which it ſhoots forth branches on every ſide, to the ſurprizing height of thirty-ſix or forty feet. The fruit attains to maturity the following year. I had the good fortune to ſee this tree in the different ſtages of its fructification; but as it had already bloſſomed the preceding year, I miſſed the pleaſure of examining and noting down on the ſpot the beauties of its efflorescence.

My abode in this place was much too ſhort to allow me to devote any of my precious time to the learning of the Cingaleſe and Malabar languages: I perceived, however, that they differed much from each other, as did again the language of the Moors from both of them. I nevertheleſs noted down the expreſſions, which the Malabars uſed in reckoning, viz.

1. unnu, undu.	6. aru.
2. rendu, rindu.	7. elu.
3. mundu.	8. ettu, ittu.
4. nalu.	9. ombedu.
5. anji, anju.	10. pattu.

11. patti-

11. pattinendu.	60. aruedu.
12. pattirendu.	70. eluedu.
13. pattimundu.	80. enbedu, aymbedu.
14. pattinalu.	90. tonnuru, imbedu.
15. pattinanju.	100. nuru, nur.
20. iruedu.	101. nutcondu.
21. iruedondu.	200. irnur.
30. muppedu.	300. munur.
40. natpedu.	1000. ayrem, ayrim.
50. anbedu.	10,000. patairim.

From Tranquebar, and the Daniſh Miſſion eſtabliſhed there, a Lutheran Prieſt had arrived in Ceylon, for the purpoſe of preaching in Columbo, and more eſpecially of adminiſtering the Holy Sacrament to the Lutherans in this place, who had no ſeparate Church here, nor Prieſt of their own perſuaſion. A Clergyman of this profeſſion generally travels hither once a year, prompted by zeal and affection to his brethren in the faith, who, according to their circumſtances, though for the moſt part moderately [illegible] reward his labours. The Daniſh Miſſion in Tranque[illegible]r was very highly extolled by ſeveral people here, who at the ſame time aſſured me, that, had the Catholics, in their endeavours to propagate Chriſtianity in India, conducted themſelves with equal gentleneſs, moderation, and Chriſtian charity, devoid of avarice, haughtineſs, and violence, the major part of the numerous

is inhabitants of Aſia would at this preſent
ne have been converts to this doctrine.
The Bread-fruit, which in the warmer climates
eds many thouſands of hungry mouths, grows
great abundance on this iſland likewiſe,
here this fruit ſupplies the place of daily
ead for ſeveral months in the year. There
two ſorts of trees which produce the Bread-
iit, and both are found here, as well in a
ild as cultivated ſtate. The one, which yields
aller fruit, without ſeed, I found at Columbo,
ale, and ſeveral other places. The name by
hich it is properly known here is the *Maldi-*
an Sour ſack, and its uſe is here leſs univerſal
an that of the other ſort, which grows more
entifully in Ceylon, bears larger fruit, and is
greater requeſt. The firſt ſort bears fruit
out the ſize of a child's head, and can only
propagated by the roots. The latter ſort
eighs from thirty to forty pounds, and con-
ins from two to three hundred kernels, each
them four times the ſize of an almond, and
s ſort can be propagated by ſeed. The trees of
ı ſorts are repleniſhed with a reſinous milky
, of ſuch a viſcous nature, that birds may be
ıt with it, in the ſame manner as with
ne. The fruits are all over prickles,
thick and ſoft rind: the internal part of
t only is uſed for food by the human

race, and the rind is left for the hogs. Bo
fruits have an unpleaſant cadaverous ſmell, a
the taſte of the internal eſculent part is r
unlike that of cabbage. The trees will flour
for whole centuries, and bear their fruit (whi
ripens by degrees) not only upon its thick
branches, but alſo upon the ſtem itſelf, for t
ſpace of eight months together, to the ineſtimal
benefit and advantage of the iſlanders.

The manner of preparing and uſing the larg
ſort of Bread-fruit, which is moſt univerſa
conſumed in Ceylon, is as follows: Accor
ing to the different ages of its growth, a
which it is uſed for food, it receives from t
Cingaleſe three diſtinct names. It is call
Pollos, when it has attained to the ſize of
Oſtrich's-egg, and is a month or ſix weeks ol
Herreli, when it is half ripe, and of the ſize of
Cocoa-nut; the pulpy eſculent part is then ſ
of a white and milky caſt. At both theſe ages t
fruit cannot be eaten without previous prepar
tion. When it is perfectly ripe it is called *W*
reka: the pulpy part is then fit for uſe, and t
which environs the ſeed has a ſweetiſh taſt
yellow, and, without any preparation, both
able and reliſhing. It has the name of I
fruit, becauſe the poorer claſs of Cingal
this fruit inſtead of bread or rice. I fre
have ſeen them eat Bread-fruit cut in

ſmall pieces, and mixed either with the raſpings of cocoa-kernels alone, or with the addition of a little rice, and ſometimes ſome ſalt, Cayenne-pepper, or onions. The ſeeds may be eaten either alone, like cheſnuts, or, together with the pulpy part of the fruit itſelf, prepared in different ways. They are uſed for food, both boiled and roaſted; the poorer ſort generally boil and eat them with the ſcrapings of cocoa-nut and ſalt: the rich fatten pigs, as well as geeſe, and other fowls with them, which are afterwards roaſted.

Fifteen different diſhes may be prepared from this fruit, and are more or leſs in uſe; viz.

1. *Caldu Curry* is prepared from Pollos, cut into thin ſlices, which are firſt boiled a little in water with turmeric, till the liquor turns yellow; after which two pinches of dried and pounded fiſh and about a pint and a half of cocoa-milk are added, and the mixture is then boiled again for the ſpace of half an hour, during which time it muſt be continually ſtirred. This ſoup is the moſt common in uſe, and is not ſeldom made with the fleſh of various animals.

2. *Seco Curry* differs from the former, in the addition of ſeveral ingredients and ſpices, ſuch as roaſted and pounded cocoa-nut, coriander-ſeeds, pepper, cinnamon, mace, ſalt, boiled bacon cut into ſmall ſquare pieces, and cocoa-milk, which are all thoroughly incorporated to-

gether, and boiled in water for the ſpace of half an hour. To this are added onions fried in butter, lemon-juice, ſometimes Cayenne-pepper, and ſalted water, which being well mixed with each other, are boiled, till they attain the conſiſtence of a haſty-pudding.

3. *Chundido Pollos* is, like the former diſh, prepared from ſlices of Pollos or Herreli, with turmeric, ſcraped cocoa-nut, Cayenne-pepper, chopped onions, and ſalt, which are boiled over a gentle fire to the conſiſtence of thick porridge.

4. *Cheſnut Curry* is prepared from the ſeeds cut into long narrow ſlips, and boiled with turmeric in water: to this are added dried fiſh, chopped chives, and cocoa-nut-milk, with which the other ingredients are boiled up afreſh, being ſtirred about all the time.

5. *Niembela* correſponds with the former diſh, with this ſingle diſtinction, that the Pollos or Herreli here made uſe of, is cut very coarſe.

6. *The fruit is ſtewed with Bacon*; on which occaſion they take thick ſlices of the unripe fruit, chopped chives, boiled bacon cut into ſquare pieces, mace, cinnamon, and ſalted water, which are boiled up together, and ſtirred continually.

7. *The boiled Fruit*, ripe, with the kernels and pulpy membranes cut into three or four parts, and boiled up with turmeric, and the addition of a little

little ſalt, is a very common diſh with the poor. It is eaten nearly after the manner of ſtewed cabbage, with ſcraped cocoa-nut; and the more opulent add to this diſh pepper and dried fiſh.

8. *Fried Pollos* is prepared in the following manner. To the unripe fruit cut into thin ſlices, cocoa-milk and a little flour are added, which being kneaded up together into a dough, are rolled up in the ſlices of Pollos, and the whole fried in a pan in freſh cocoa-nut oil.

9. *Empade* is the name of a diſh, that, in addition to the fried ſlices above-mentioned, conſiſts of chopped onions, dried fiſh, roaſted and chopped onions, and pounded cinnamon, which are boiled in a broad and ſhallow veſſel over a gentle fire, the mixture being continually diluted with cocoa-nut milk.

10. *Forced meat balls* of Pollos are prepared in this manner. The unripe fruit is boiled and beat up to a kind of haſty-pudding; to which are added chopped onions, cinnamon, pepper, nutmeg, ſalt, pounded biſcuits, and the yolk of an egg. Of theſe ingredients, well mixed, they make balls, which are rolled in the white of an egg, that they may hang together. Theſe are afterwards fried in butter, or in butter and cocoa-nut oil, till they turn red; after which a ſauce is poured upon them, conſiſting of butter, powder of cinnamon, pepper, ſalt, and lemon-juice.

11. A *Confection* likewiſe is ſometimes prepared of the ſeeds and their pulpy membranes. For this purpoſe the membranes, which ſurround the ſeeds, are cut into two or three parts, and fried in freſh cocoa-nut oil. The oil is then wiped off well with a towel, and the fried membranes laid in a ſieve, that the oil may drain the better from them. They are next boiled in ſyrup of ſugar, dried, and put up in glaſs-bottles, which muſt be well corked, in which caſe this Confection may be preſerved ſeveral months, and uſed with tea. The kernels of the ſeeds ſeparated and well purged from the pulpy membranes by which they are ſurrounded, are frequently fried in oil, and boiled up in the ſame manner in ſyrup, and in the ſame manner likewiſe preſerved, and uſed with tea; and, in proportion as the ſyrup evaporates, a freſh ſupply may be poured into the bottles, in which caſe they may be preſerved for half a year.

12. *Fios* is made by dipping the ripe kernels of the ſeeds in a batter compoſed of cocoa-nut milk with the yolk of eggs, and frying them in freſh cocoa-nut oil.

13. *Pancakes* are fried in the uſual manner, and compoſed of the juice of Siri, cocoa-nut milk, the dried meal of the kernels, and yolks of eggs, which have ſtood over night to ferment.

14. *Pei*

14. *Pei* or *Jambal*, is rather a ſauce than a ſeparate diſh. And indeed it is only uſed by way of a reliſh to other diſhes, ſuch as fiſh, rice, &c. To make it, boiled unripe fruit are required, muſtard-ſeed and turmeric, each of which ingredients muſt be firſt beaten up ſeparately into a paſte, and afterwards all together thoroughly incorporated with vinegar. Some add to this Cayenne pepper, ginger, and ſalt, previouſly reduced to powder, and well mixed together.

15. *The fruit is dried* ſometimes for future uſe, during thoſe months, when it is not to be had freſh. For this purpoſe they gather the fruit when it is half ripe, and extract the pulpy part, which they either leave intire, or cut it into ſlices. It is then boiled a little, and dried in the ſun, after which it is hung up in order to preſerve it, either in the chimney or ſome other dry place. When thus prepared, it may be kept a whole year, and the poorer ſort eat it with ſcraped cocoa-nut, either thus in its dried ſtate, or boiled up afreſh.

Of this tree, bearing ſuch beneficial fruit, I was at no little pains to carry with me ſome live plants to Europe. For this purpoſe I collected of the ſmaller ſort, that produces no ſeed, about fifty live roots, which I planted in a large wooden box, and had the ſatisfaction to ſee them, at the

expiration of a few weeks, ſpring up and thrive greatly. Of the larger ſort I collected ſeveral hundred ſeeds, of which I ſet upwards of a hundred in another large box; theſe quickly ſprang up, and throve extremely well. In order that the remainder of my ſeeds might not grow dry during my voyage, nor become rancid, nor be damaged in any other way, I deviſed ſeveral methods of preſerving them. Some I only wrapped up in paper, laid in a drawer, and, during the voyage, expoſed now and then to the open air; another part I put into glaſs-bottles, which I carefully ſealed up; a great part I environed with wax to exclude the air from them; another part I laid in dry ſand, and another part again I ſowed every month in earth, during my voyage, in order that it might grow up gradually.

The Pearl-Fiſhery was formerly carried on here with advantage in the channel between the iſland and Coromandel, which is ſhallow, and is ſaid to have a ſandy bottom. At preſent this Fiſhery has been diſcontinued for ſeveral years, on account of certain diſputes between the Nabobs on the Coromandel-coaſt and the Company, which the Engliſh are ſaid to encourage, concerning the legal right to this Fiſhery. I ſaw ſeveral beautiful and large Pearls, which had been fiſhed up here; and pearl Bandeaus, compoſed of large as well as ſmall Pearls, are frequently worn by the

the rich Merchants' ladies over their hair. This Pearl-fiſhery was formerly always farmed out to one or more individuals annually for a certain ſum. Theſe Farmer-Generals after farmed out again to others the privilege of fiſhing for Muſcles with a certain ſtated number of boats and men. After the Muſcles are brought up by the Divers, they are thrown careleſsly in heaps upon the ſhore, and ſold at random to the Merchants, who at this time aſſemble there. The Muſcles are ſaid to open, as ſoon as the animal they contain is dead and begins to putrify, when they may eaſily be examined, and the Pearls extracted. Sometimes not the leaſt profit is made by this traffic; whilſt at other times one ſingle Pearl pays for the purchaſe of ſeveral heaps.

On the 28th, after taking an affectionate leave of my friends in Columbo, I travelled by land to Gale, in the company of M. BELLING, Secretary of Police, who carried with him the letters which were to go by the ſhip, that lay ready to ſail, in the harbour of Gale.

Previous to my departure, I purchaſed a quantity of the dried fruits of betel-pepper, which is ſold here at a cheap rate, and at the Cape of Good Hope brought a conſiderable profit, of at leaſt one hundred per cent. As the ſlaves and Indians have every where free acceſs

to freſh betel-leaves, which they chew daily, it neceſſarily follows, that the ſlaves in thoſe places, where the coolneſs of the climate does not allow of the cultivation of this pepper, muſt content themſelves with uſing the fruit inſtead of the leaves.

February 6th, I embarked on board the ſhip *Loo*, very early in the morning, together with the Captain and Paſſengers, who were bound for Europe.

The harbour of Gale is well guarded with fortifications; by its winding it forms an elbow, and is not eaſy to clear. From this harbour ſail all the ſhips bound to Europe or India, and here they take in their laſt lading.

We ſet ſail with a favourable wind, croſſed the Line on the 11th of *February*, and the Tropic of Capricorn, on the 16th of *March* following. The ſhip was commanded by Captain Kock, a native of Norway, and was loaded with about 1500 bales of cinnamon, of the Company's own gathering, and ſome cinnamon from Candia, beſides a great many bales of manufactured cotton, from *Suratte* and *Tutucorin*, together with pepper from the coaſt of Malabar.

Above thirty ſlaves were likewiſe carried out by the officers, and ſold to great advantage at the Cape. They were all males, the major part from the coaſt of Malabar, and ſome few Pampuſes with curly hair. This rendered it neceſſary

for

for me to be very circumſpect and careful, that all the ſlaves ſhould have had already the ſmall-pox and meaſles, and that no ſymptoms of theſe diſorders ſhould be diſcovered on board during our voyage. For when unfortunately this is the caſe, the ſhip is obliged to perform quarantine at the Cape, and to anchor off Robben-Iſland, without one ſingle man being ſuffered to come on ſhore; inaſmuch as the inhabitants of this colony ſtand equally in dread of the ſmall-pox and meaſles, as of the plague, and yet will not, after the example of the Europeans, adopt judicious and wholeſome regulations and inſtitutions for inoculation, as well as other means of oppoſing theſe epidemic diſtempers, which are capable of depopulating almoſt a whole country.

Moſt of the diſeaſes that occured during this voyage, were venereal, with their whole train of formidable ſymptoms, which both the ſailors and the ſlaves had contracted by their diſſolute courſes of life in Ceylon.

As we approached the ſouth between 30 and 35 degrees, we had very frequently ſtorms of thunder, with hail, rain, and ſnow, which latter however diſſolved immediately; and on the 28th of *March*, during a thunder ſtorm, the electrical fluid was perceived to gliſten from the tops of the fore and main-maſt.

April

April 7th and the following nights, ſeveral long and lucid worms (*Scolopendræ electricæ*), were perceived to fall down upon the deck. Theſe came always from the ſame ſide as the wind, which beyond a doubt blew them down, and indeed they always fell upon the windward ſide. So that they never came from the ſails, but from the maſts and top-gallant maſts. When trodden under foot upon deck, or otherwiſe cruſhed to pieces, a phoſphoric fire conſtantly iſſued out from the whole length of the body. No appearance of wings could be diſcovered in them: but they probably crawled up the maſts with their feet, of which they have a great number, and afterwards fell down from them, on the wind blowing up a briſk gale.

April 22d, between the 45th and 46th degrees of latitude, not far to the eaſtward of the Cape of Good Hope, we ſaw at noon, or a few minutes after, a rain-bow, which lay upon the ſurface of the water itſelf. It blew a freſh gale at the time, and the ſun ſtood at the higheſt point of the heavens at N.N.W. and the rain-bow was in S.S.E. It began with a lucid ſegment of a circle at the horizon itſelf, which gradually got up higher and higher, and ſpread at the ſame time at the ſides, having at top a narrow dark-red border. From the two extremities of it proceeded two branches, like two horns, which

bending

bending inwards extended to two-thirds of the diſtance between the brink of the ſhore and the ſhip, being variegated with moſt beautiful colours of red, yellow, green, and blue-purple. In this ſituation it continued half a quarter of an hour, after which it gradually vaniſhed in an inverted order. On the left ſide, towards the eaſt, appeared another rain-bow, the colours of which were in an inverted order, when compared with the former, which ſhews that it was only occaſioned by the reflection of the rays of the former. It was not very high at the top, though it ſtood higher than the ſegment of the former at the brink of the ſhore. After a quarter of an hour indeed there aroſe again a ſimilar ſegment, but it did not extend itſelf out ſo as to form a rain-bow. The ſky was during the whole time covered all over with ſmall light clouds, and it was with difficulty we could diſtinguiſh that rain fell, even the horizon. Such rain-bows as theſe, which can only occur on the ocean and large ſeas, are probably not often obſerved.

Several times likewiſe in the courſe of this voyage we ſaw water-ſpouts hovering in the air in various forms. Theſe began always to diſappear at the bottom. And indeed at the time of their appearance we had moſt commonly thunder-ſtorms, which came at ſtated intervals, together with violent guſts of wind.

Boobies

Boobies (*Pelecanus Sula*) began at length to ſhew themſelves, and confirmed our joyful hopes, that we ſhould ſpeedily deſcry land. Theſe birds are always a ſure ſign to mariners, that they are not far from the African coaſt, and it frequently happens, that, when they make their appearance, land is at the ſame time deſcried from the maſt-tops. They ſeldom venture farther out on the ocean, than will allow of their return to the creeks and bays againſt evening, where they frequently ſpend the nights. We likewiſe diſcovered land immediately afterwards; but as there blew a hard gale from the ſouth-eaſt, we could not loof up into the road; but were obliged to caſt anchor towards evening off *Robben Iſland*, to which place we with difficulty worked the ſhip up.

By the violent gale of wind, and at the ſame time the cold which it occaſioned, I had the painful mortification to ſee ſeveral of my Bread fruit trees and other plants, either blighted with the cold, or elſe unearthed and loſt by the violent agitation of the ſhip.

The following day, *April* the 27th, we came ſafe and well to the cuſtomary anchorage in the road, where we found eleven veſſels ſtationed before us, and after the ſhip had been duly examined by the Commiſſioners ſent for that purpoſe, we received permiſſion to land.

I took

I took up my abode with my former hoſt, M. FEHRSEN, and in the ſame apartments, which I had occupied three years before. As theſe rooms were putting into order for my reception, a circumſtance occured, which greatly ſurpriſed and perplexed me. In the anti-chamber ſtood a large cheſt belonging to my hoſt, which I had very frequently made uſe of, during my former three years abode here, inſtead of a table, to lay the herbs, ſeeds, and bulbous plants upon, that I had collected. The laſt year of my reſidence here, A. 1775, I had arranged the pulpy plants, which the deſerts of Africa produce, in ſuch a manner, as to fit them to be ſent to the gardens of Europe by the homeward-bound ſhips. Whilſt I was thus occupied, it happened that a plant, which externally had the appearance of being entirely dried up, and was enveloped in a multiplicity of dry *ſcales* or *ſhingles*, fell behind this cheſt. But, on the cheſt's being removed from the wall, in order to clean out the anti-chamber, the plant was diſcovered behind it, from which a branch had ſhot forth nearly ſix inches in length, although it had not for the ſpace of ſix or ſeven weeks ſince my finding it in the deſert, ſhewn the ſmalleſt ſymptoms of life, neither had it afterwards, during the three laſt years, been ſupplied with any earth, nor the leaſt moiſture, except that

proceeding

proceeding from the coolneſs which might be imparted by a ſtone-floor. This circumſtance proves how hardy and tenacious of life the African plants are, which thrive in the moſt parched deſerts, and how long they can ſubſiſt without water and nouriſhment. This identical plant I afterwards took with me to Europe, and found, that thoſe which I had before ſent thither of the ſame ſpecies, had put forth both branches and leaves in the Botanical Garden at Amſterdam, without as yet diſplaying their bloſſoms, and making known their names.

A Swediſh veſſel, which lay at anchor in the road, procured me the pleaſure to embrace at this place ſeveral of my dear friends, who had come from my beloved native country, and among other novelties, had brought me letters, together with the agreeable news, that I had been appointed Demonſtrator of Botany in the Univerſity of Upſal, under Profeſſor LINNÉ, who had ſucceeded his invaluable father.

The town at the *Cape* had been, during the three years of my reſidence in India, ſo greatly changed in moſt places, by additional buildings, and newly built and improved houſes, many of them two or three ſtories high, that I could ſcarcely recognize it again.

The foregoing Summer the ſouth-eaſt wind had laid waſte the whole country. It raged with uncommon

uncommon violence, and was accompanied with ſuch exceſſive drought, that complaints were made almoſt univerſally throughout the whole land of a ſcarcity of corn. In moſt places nothing had been able to grow for the drought, and in ſome places, where the corn ſtood well, as for inſtance, on the other ſide of the Hottentot Hollands mountains, the rain had fallen again in ſuch abundance, that the grain, which was already reaped, rotted in the corn-ricks, whilſt that which ſtill continued on the ſtalk, began to ſhoot and grow in the ear. Theſe circumſtances raiſed the price of corn in the town in a moſt unprecedented manner, inſomuch that a load of corn, which had formerly ſold for ten rix-dollars, now roſe to the enormous price of three and thirty rix-dollars.

I met here with a Mr. PATTERSON, an Engliſhman, who was come to this place, in order to collect from the interior of Africa, and tranſmit home to his own country, both the ſeeds and live roots of ſuch plants, as were ſcarce and peculiar to theſe parts. He profeſſed to travel at the expence of certain individuals, and poſſeſſed ſome ſmall knowledge of Botany, but was, in fact, a mere Gardener.

The Dutch Company allows each Officer in the ſhip a large cheſt, four feet and a half in length, and two and a half in breadth, which

they have permiſſion to ſtore with certain commodities, that are afterwards ſold by public auction, for the private advantage of the individuals. Thoſe, who had not already furniſhed themſelves with commodities in the Eaſt-Indies, and had ſtored their cheſts with *Tamarinds* or other articles, bartered now at the Cape coarſe Chintzes and other articles which were not prohibited. Fine Chintzes, and Cottons, Spices, and certain other commodities, which the Company alone deals in, are prohibited to individuals, and conſidered as contraband.

May 15*th*, 1778, I once more left the Cape, in order to ſail to Europe. We ſet ſail in company with four Dutch veſſels, which were appointed to conſtitute a fleet for their mutual defence. A Daniſh ſhip, which cleared out at the ſame time with ourſelves, ſhot paſt us with great celerity, and, being a much better ſailer, ſoon vaniſhed out of our ſight.

The ſailors had purchaſed ſeveral Baboons, which they deſigned to carry to Holland. Theſe animals are always of a miſchievous diſpoſition, eaſily provoked, and bite terribly; for which reaſon they are generally obliged to be kept tied up. If any of them at any time got looſe, it was not an eaſy taſk to catch them again, as they climed with incredible ſwiftneſs up the ropes

and

and rigging, and were in no dread at all of the higheſt top-maſts.

May 25. Hitherto we had conſtantly had contrary winds, ſo that we could not proſecute our voyage, nor get out of ſight of the African coaſt. We now had at the ſame time thick fogs, inſomuch that we could not ſee at any great diſtance from us. In the mean time we had approached ſo near the ſhore *on the* 26*th* in the morning, when the weather began to clear up, that we might eaſily have made land, eſpecially the Commodore's ſhip, which drove quite near to the rocks. Had a heavy gale of wind in theſe circumſtances blown from the north-weſt, we muſt infallibly have been loſt; but, fortunately for us, the wind blew from the north, which extricated us out of our danger. Our Commodore KOELBIER, on board the *Canaan*, was beyond a doubt in fault in the preſent inſtance; inaſmuch as the preceding evening he kept cloſe to the land, inſtead of endeavouring to bear away to make the weſt; the other ſhips were bound to follow him, and ſail in his track. The following night we entirely loſt ſight of the Commodore's ſhip, in conſequence of which the command devolved upon Captain KOCK, of the *Loo*. *On the* 28th in the morning, we again deſcried the Commodore's ſhip, but loſt ſight of her again on the 30th.

June 3d, we ſailed quite cloſe to the Commodore's ſhip, which, on account of the wind being contrary, having kept too much towards the land, was now not able to come up with the fleet. This however did not in the leaſt prevent our loſing ſight of her the following day, notwithſtanding it became more calm towards night, inſtead of blowing with any degree of force. Hence it was eaſy to conclude, that the Commodore did not wiſh to keep up with his fleet, but rather, on the contrary, did all he could to ſeparate from it, in order to be able, with leſs control, to continue and make the greater ſpeed in his voyage home. In fact, we had been greatly detained by his numerous turnings and windings; not to mention that during the whole time likewiſe, we had either contrary winds, or elſe were becalmed.

On the 6th, we had a ſouth-eaſt trade wind, and *on the* 12th, paſſed the *Tropic of Cancer*.

On the 17th we ſaw ſomething floating upon the water, which reſembled large white flowers; I fiſhed for, and caught ſome of them, and found them to be nothing elſe than that ſpecies of *Lepas* (*anſerifera* and *anatifera*) which, by means of its lax and pliable tube had clung to bamboo canes, and pieces of wood, in cluſters of a dozen and more, and which now floated upon the water. When the animal opened its five ſhells, they

bore a perfect reſemblance to a full-blown flower.

On the 24th in the morning, we diſcovered the iſland of *Helena*, which belongs to England, and the harbour of which is fortified with very ſtrong batteries. The land appears very high and mountainous, and may be deſcried at a very great diſtance. The Engliſh ſhips which were homeward-bound from the Eaſt-Indies, always aſſembled at this place during the preſent American war, in order to proſecute their voyage together afterwards in fleets, accordingly as it may happen, more or leſs numerous. In the afternoon we had ſailed on juſt before the middle of its road, where at that time no ſhips lay at anchor; and as we had not met with any traces of our loſt Commodore, a ſhip's council was held, in which it was concluded not to wait for him any longer, but to continue our courſe with the briſk wind, which we now had. The road was ſaid to have a very bold ſhore, ſo that ſhips might ride at anchor quite cloſe to the land.

June 30th in the afternoon we paſſed Aſcenſion Iſland, which frequently ſerves as a place of refreſhment for Swediſh and other veſſels, which take in Tortoiſes there on their return home. The ſhips, which provide themſelves with refreſhments from the Cape of Good Hope, ſail by this iſland. It is mountainous, ſterile, and deſtitute

of freſh water. The ſurface is likewiſe covered with a kind of aſhes, which plainly evinces, that it muſt formerly have been a Volcano.

July 7th, having the night before croſſed the line, we were conſequently ſaluted towards noon by the other two ſhips with eleven vollies, which we anſwered in the ſame manner.

On the 24th we paſſed the Sun, when we perceived no kind of ſhadow whatever on either ſide of any thing, that was ſet upright upon the deck. Before we had the Sun at noon in the north, now it ſtood right vertical over us, and after this was ſeen in the ſouth, and ſank continually lower and lower towards the horizon.

On the 29th the Captains of the other two ſhips came on board of us, in order to open the ſealed letters, which were to direct us, whether the ſhip ſhould ſail through the Channel, or take a circuitous route behind Great-Britain, as is uſually done in war-time. We ſailed now in the ſea called the *Croſs Sea*, which is pretty thickly covered with *Sargazo (Fucus natans)*. This ſea-weed floats upon the ſurface of the ocean in incredible quantities. Sometimes it quite hides the face of the water in calm weather, ſo that one ſeems to be ſailing through a meadow: at other times it forms large floating iſlands, and ſometimes, during ſtormy weather, it is driven about more looſely. This *Fucus* ſeemed to hold out a

plain

plain proof, that it grows as it floats in the water, and ſhoots forth new ſhoots at the extremities, which grow larger by degrees. Among this ſea-weed I diſcovered various animals, that harboured and ſought their food in it. The moſt numerous of theſe were the *Scyllæa pelagica*, the *Cancer minutus*, of various ſizes, and the *Lophius hiſtrio*, a fiſh, which the Dutch call *Crown-fiſh*, which was very much variegated, and at the ſame time beautiful, and, when of a certain ſize, in high eſtimation. Some of theſe I preſerved in ſpirits of wine; they were moſtly very ſmall, and it is but ſeldom, that they are found of the length of a finger or upwards. The looſe rays, which this fiſh has upon its head and back, and which reſemble a crown, have given occaſion to its name. It is ſeldom that it can be brought to Holland alive; but when this fortunately happens to be the caſe, provided the fiſh is of any moderate ſize, it is ſaid frequently to fetch ten ducats.

Auguſt 25th, a hog was killed on board, in whoſe bladder was found a kind of chalk-ſtone. It was nearly round, ſomewhat flattened, and rough all over, with ſmall knobs. The colour was at firſt a cheſnut-brown, but grew paler and paler as it dried. It was ſomewhat larger than a muſket-ball; and of a cloſe-grained texture within. This hog had been purchaſed in Ceylon.

September the 12th, having heaved the lead, we found ground, and ſaluted the other ſhips with eleven vollies, who returned the compliment.

We had on board a man, whoſe fate was equally ſingular and unfortunate. He had been engaged as Chief Surgeon on board a ſhip from Enkhuyſen, called *de Jonge Hugo*, which was commanded by Captain KLEIN, this unhappy man's implacable enemy. His name was BEROAKKER, and he appeared to me during the whole voyage to be a ſteady, ſerious, and worthy old man. Whilſt the ſhip lay ready to ſail, the Captain had taken umbrage at him, and loaded him with all manner of inſults, even ſo far as to let the boys have him in deriſion. At laſt he wrote word to the Director who had the inſpection over the ſhip, that this man was inſane, and requeſted that another Surgeon might be appointed in his place, who was accordingly ſent on board. Upon this the Captain immediately ſet ſail, without putting the accuſed on ſhore, whom he kept under an arreſt during the whole voyage to the Cape, and would not ſo much as permit him to come once on deck, to breathe a little freſh air. During the voyage he cauſed a writing to be drawn up and ſigned by ſome of the Officers, who were his creatures, purporting that the above-named perſon was poſitively in-

ſane.

ſane. On our arrival at the Cape, the unhappy man was conducted on ſhore, and immediately clapped into priſon, without having the privilege of walking out, or having any opportunity to prefer a complaint, and without being examined either by the Governor, the Fiſcal, or any of the Senators. When our ſhip was muſtered, he was ſent thither like a priſoner to be conveyed in it to Europe, without ſalary or any kind of emolument whatever. Notwithſtanding that this man had been pronounced inſane, I was not able, during a voyage of ſeveral months, to perceive any ſymptoms of derangement in him, or to diſcover the leaſt probability, by his appearance, that he had ever been ſo. In the courſe of ſeven years, which I ſpent in India, in the ſervice of the Dutch Company, I had an opportunity of ſeeing ſeveral inſtances of violence and oppreſſion in Captains, as deſpotic as they were wicked and brutal: but what ſtruck me with the greateſt ſurpriſe in this inſtance was, that neither the Governor nor any Members of the Adminiſtration at the Cape ſufficiently inveſtigated this buſineſs by means of which the innocent ſufferer might have been freed from farther oppreſſion, and the malicious miſanthrope brought to condign puniſhment. All, whom I interrogated about the character of Captain KLEIN, ſpoke of him with the moſt ſovereign

contempt, as of an ill-conditioned, fierce, and ſavage man, who was not even qualified for the poſt he held.

On the 16th we came within ſight of the Engliſh coaſt at the *Lizards*, and cruized about there for a whole night and day, till we diſcovered the Dutch man of war, which was ſent out to meet and convoy home the richly-laden Eaſt-Indiamen. One of theſe afterwards accompanied us, and convoyed us to the Texel. The firſt ſignal was given on our ſide by the diſcharge of four guns, and by alternately hoiſting and lowering our colours. Upon this the man of war anſwered us in the ſame manner, by hoiſting and lowering her pendants, together with the diſcharge of five guns. As ſoon as the ſhips were come ſomewhat nearer to each other, a Lieutenant and Clerk were ſent from the man of war, in order to ſearch our ſhip, whether it carried any contraband wares, and this ſearch was made in the Captain's cabin only among his wine bottles.

On the 18th, the Captains of the three homeward-bound ſhips repaired to the man of war, in order to open a ſealed letter from the *Overduyn*, one of the ſhips that came from China, by which letter we now firſt received intelligence, that the lading was conſigned to Amſterdam.

At the ſame time we likewiſe obtained the intelligence, that our Commodore KOELBIER, with

with the ſhip *Canaan*, had arrived two days before, and had ſailed on, which ſhip we had miſſed from our company four months ago, off the African coaſt.

On the 28th we ſailed in the Channel between Dover and Calais, with a good and favourable wind; but in the evening about ten o'clock, a ſudden and violent ſtorm aroſe, which drove us more and more againſt the land, rent our ſails, and tore down our top-maſts. The ſhip toſſed about ſo violently, that it was impoſſible to ſtand always upon one's feet. We were ſo near the Breakers, that all gave the ſhip up for loſt, without any poſſibility of deliverance; for which reaſon indeed at laſt none of the ſailors could any longer be perſuaded or encouraged to attempt any thing for the preſervation of the ſhip. Beſides the darkneſs, we had this additional misfortune, that the crew was feeble and quite worn out, owing to the exceſſive covetouſneſs of the Captain and Firſt Mate, ſo that many of the crew, exhauſted with their toils, fell down from the rigging, and ſeveral fainted away on the deck itſelf. Their fare had been wretched during the whole voyage, and conſiſted of nothing but meagre food, as for inſtance, rice and fruits, with very little of thoſe more ſtrengthening viands, which are indiſpenſably neceſſary for a Mariner. The Captain and Firſt Mate, who had

had expected that the voyage would not prove ſo tedious, had very unwarrantably conſulted their own private intereſt and advantage, by diſpoſing at the Cape of a great part of the meat, pork, and other articles of proviſion, which are allowed for the crew, and were by that means reduced to great ſtreights, in conſequence of the procraſtination of the voyage. This had not only reduced the men's ſtrength, but had likewiſe occaſioned much diſcontent and murmuring among them. For this conduct both the Captain and Firſt Mate were in the ſequel arraigned, and both declared incapacitated for farther ſervice. As ſoon as the morning began to dawn, we perceived that we had driven in between the ſand-banks, almoſt directly oppoſite Oſtend, and that we were entirely ſeparated from our company. And as we were now, through the particular providence of God, delivered from deſtruction, and from the calamities which had threatened us the preceding night, the crew imbibed freſh courage to extricate the ſhip from its dangerous ſituation; which attempts likewiſe ſucceeded, with the favourable wind that now prevailed. Excluſively of all other damage, which I ſuffered on this occaſion, I had the misfortune peculiar to myſelf, of ſeeing my plantation of upwards of a hundred ſhrubs of both ſpecies of the Bread-fruit tree, and other extremely

tremely ſcarce plants, entirely thrown topſy-turvy and abſolutely deſtroyed.

After ſurmounting theſe misfortunes, we arrived at length juſt before the opening of the Texel, *on the 29th* following.

October the 1ſt, we ſailed between the Texel and Helder, ſaluted the road, and let fall our anchor. All now with joyful hearts invoked the Almighty; and I had, more than any of them, reaſons of the moſt binding and compulſory nature to bring him my thank-offering, having, during a ſeven years ſeries of toilſome and not unfrequently irkſome peregrinations, enjoyed in the higheſt degree the benefit of his powerful protection and ſpecial guardian care.

On the 6th, M. BEAUMONT, the Director, came on board, in whoſe preſence all our cloaths-cheſts, and other things were ſearched, and the crew diſcharged, excepting about ſixty men, who ſtaid behind to unlade the ſhip.

I ſailed in company with ſome of the other officers in a hired boat, and arrived in ſafety at Amſterdam, where my much-reſpected Patron, Profeſſor BURMANNUS, with the utmoſt kindneſs and benevolence made me an offer of his houſe and table.

I ſpent my time in viewing with him the moſt remarkble Collections, which are to be found in Amſterdam, among which that in the poſſeſſion

poſſeſſion of the Merchant van der MEULEN, was the moſt valuable, eſpecially with regard to Birds and Inſects.

After this I made an excurſion into the vicinity of Haarlem, in order to pay my reſpects to my three worthy Patrons, van der POLL, van der DEUTZ, and ten HOVEN, as likewiſe to ſee their country ſeats, and the beautiful plantations of all kinds of Exoticks, which, at an incredible expence, they have raiſed in the moſt ſandy and barren plains near this ſpot. It was not without the moſt ſenſible pleaſure, that I obſerved here ſeveral of the vegetable productions both of Africa and the Japaneſe iſlands, which teſtified that the pains (not unattended with danger) which I had been at in collecting them, had not been wholly loſt. I had likewiſe the extreme happineſs to receive from my Patrons teſtimonies of their ſatisfaction on the ſcore of my diligence, together with the moſt handſome recompence, on account of which the laſt-mentioned Gentleman, M. ten HOVEN, paid me, on my return to Amſterdam, an unexpected viſit. This Gentleman, who is ſaid to have a yearly income of more than 300,000 guilders, did not deem it beneath his dignity to pay me a viſit in the Dutch faſhion, on foot, and without any attendants, and at the ſame to make me a

preſent

preſent with his own hand of 128 Dutch Ducats in gold.

I afterwards, in company with Dr. *Klochner*, made an excurſion purpoſely to Haarlem, to ſee M. VRIEND's fine Collection of Inſects, together with the curious animals of every claſs, which are kept in the houſe belonging to the Society of Sciences at Haarlem.

The *Phalæna brumata* was at this time very common in the orchards and fruit-gardens. It was prevented from laying its noxious eggs in the buds of the bloſſoms, by the method invented by Profeſſor BERGMAN, and which was here very much celebrated, viz. by means of the tarred bark of a birch-tree bound round the ſtem of the tree.

It is very common in Amſterdam, as well as in other parts of Holland, to diſpoſe of Collections of Natural Curioſities, by public auction. Such auctions were now held ſeveral times, agreeable to printed Catalogues, after the Cabinet had been previouſly expoſed for a certain time to the inſpection of the public.

Among other rarities which I ſaw in Amſterdam, was likewiſe a very pretty Collection of Coins in the poſſeſſion of the Miniſter of the church called the *Oude Kerk*. I had here the unexpected pleaſure to ſee, for the firſt time, the Zodiac Rupees, as they are called, in gold, the whole

whole twelve together complete, which I could in India neither procure a ſight of, nor obtain in change, and of which one ſeldom finds a complete collection in Europe. He had redeemed theſe twelve Coins with 300 Dutch Guilders, and had the goodneſs to part with them to me at my earneſt ſollicitation for 700 Guilders. This Collection, together with the Portrait of SELIM Iſt. had been made a preſent of by the Governor-General IMHOFF, from Batavia, to ſome of his relations in Holland, who were afterwards under the neceſſity of diſpoſing of them. This Coin had been ſtruck both in Gold and Silver by the Empreſs NOUR-MAHAL, the above-mentioned SELIM's Conſort, in the ſpace of twenty-four hours, during which ſhe, with the Emperor's permiſſion, reigned with abſolute ſway. And as theſe, after the Monarch's demiſe, were prohibited, called in and melted down, it is now very uncommon to meet with all the twelve, which bear upon one ſide the impreſſion of one of the twelve ſigns of the Zodiac, and on the other are marked with Arabic or Perſian characters.

I could not well accept of Profeſſor *Burmann's* very kind invitation to reſide in his houſe, as he and his family were themſelves ſtraitened for room, for which reaſon I hired an apartment of a worthy friend and countryman of mine,

ERIC

BERG, who was Proprietor of a Silk-Manufactory, and was ſettled in this e all foreigners are at perfect liberty eir bread, let them be of what country what religion they will. This did not r prevent me from viſiting daily in his nd being quite overwhelmed with his es, the remembrance of which ſhall re-eper impreſſed in my breaſt, and be d as a more ſacred depoſit there, than had been engraved on the moſt coſtly marble.

like manner I had the happineſs, (and the mbrance of it even at this diſtant period of een years, in which I prepare the preſent ative for the preſs, awakens the moſt lively ſe of joy and gratitude in my ſoul) I had the ppineſs to experience from ſeveral of my re-ctable countrymen every poſſible civility, ark of friendſhip, favour, and real ſervice; as r inſtance, from the Conſul-General, M. HAS-LGREN, Meſſrs. FAOHRÆUS, SWART, and NGE, &c.

Having finiſhed my engagements with the tch Eaſt-India Company, and received my ry, together with the cuſtomary gratuity, I olved to travel to England, and ſpend part of e winter in London.

With

With this view I went in the mor
vember to the Hague, where I inſp
Royal Highneſs the Hereditary Sta
valuable Cabinet of the productions c
and Art, and paid a viſit to M. Lyo
order to ſee his choice Collection of Shel
which I travelled to Rotterdam, and from
farther on to *Helvoet Sluys*.

Here contrary winds prevented my
over for ſeveral days, and when afterwar
able at laſt to ſet ſail, in company with
other paſſengers, in the Engliſh Packe
Royal, ſuch a heavy ſtorm aroſe, and at la
trary winds, that we were driven a great
out of our courſe, and landed at a place a
diſtance from London, from whence we
obliged to go by land to the Metropolis, wh
I arrived on the 14th of *December*.

Mr. DRYANDER, my friend and quond
fellow-ſtudent, had very kindly taken upon hi
ſelf the charge of providing lodgings for m
my firſt care therefore was to wait upon t
Gentleman, at the houſe of Sir JOSEPH BAN
agreeably to the addreſs he had given me.
ſoon as I had ſent in my name, I was recei
in the moſt polite manner by Dr. SOLAND
who did me the honour to introduce and pre
me immediately to Sir JOSEPH BANKS, in h
Cabinet of Natural Hiſtory.

Th

This Gentleman was not only pleaſed to receive me with the greateſt kindneſs in the preſent inſtance, but continued, during the whole time of my abode in London, to ſhow me all poſſible favour, and, what was the chief object of my wiſhes, granted me free and uncontrolled acceſs to his incomparable Collections, made (that appertaining to the vegetable kingdom in particular) from every part of the globe. I accordingly ſpent the forenoon of every day in his houſe, and went with the utmoſt attention through his extenſive Herbarium, which was a moſt commodious as well as efficacious method of enlarging my ſtock of knowledge in this department of my favourite Science. And as at the ſame time ſeveral learned men daily aſſembled here, as though it were to an Academy of Natural Hiſtory, I had frequent opportunities likewiſe of forming connexions, that proved as uſeful as they were truly creditable and honourable.

I farther ſaw, during my ſhort abode in this country, every thing worthy of notice, eſpecially with reſpect to Natural Hiſtory, as for inſtance, the *Britiſh*, *Leverian* and other *Muſeums*. The firſt is on a very large and extenſive ſcale, and contains Collections in many different articles, ſuch as Books, Manuſcripts, Antiquities, Coins, and the Apparel of remote nations, Utenſils, &c.

KÆMPFER's Manuſcripts and Collection of Herbs, together with the Drawings and Deſigns, were the articles, which it gave me the greateſt pleaſure to ſee here. Theſe were now almoſt a hundred years old, and had been bought up by Sir HANS SLOANE, after the Author's death. The latter was the property of an individual, was ſhewn for a certain ſum, and conſiſted chiefly of minerals and animals.

In like manner I made ſeveral excurſions in the vicinity of London, to ſee the beautiful gardens of KEW, abounding with living plants, and under the direction and care of Mr. AITON: Mr. LEE's garden, which is uncommonly rich in trees and ſhrubs: Dr. FOTHERGILL's garden, CHELSEA, &c. At Mr. LEE's I likewiſe ſaw his daughter's fine Collection of Inſects, which had been increaſed with the uncommonly beautiful Inſects from the Coaſt of Bengal, which Lady MONSON had collected there, and previous to her death bequeathed to Miſs LEE.

Profeſſor FORSTER, ſenior, whom I waited upon one day received me with much friendſhip, and not only procured me the pleaſure to ſee the plants and ſhells, which he had collected during his voyages in the Pacific Ocean, but was farther pleaſed to preſent me with a whole Collection of them, which has entitled him to my ſincereſt gratitude and eternal acknowledgements.

The Engliſh ſpend the day in a much better manner than any other nation I have hitherto ſeen. Nine o'clock in the morning is the common hour of breakfaſt, which generally conſiſts of tea and ſome light diet. After breakfaſt they follow their occupations, till three in the afternoon. At four o'clock, when the merchants return from Change, dinner is generally ſerved up, though people of faſhion dine an hour or two later; after which the evening is either ſpent in company or ſome other paſtime. This mode of living appears to me much more rational than what is cuſtomary in other places, viz. during one's occupations to faſt till one o'clock, and afterwards to conſume the beſt, lighteſt, and fineſt part of the day at dinner, after which one is little qualified for attending to any buſineſs in the afternoon.

For this reaſon Aſſemblies are always held at ſix in the evening. The members of the Royal Society of Arts and Sciences aſſemble likewiſe at that hour on a ſtated day in the week, and I had the pleaſure to be preſent at their meetings ſeveral times. The Meeting-room is furniſhed on one ſide with benches for the accommodation of the members, like a church, and the Preſident with his Secretary ſit before a table. Each member has the privilege to take with him one

of his friends, but he muſt in this caſe deliver in his name to the Preſident.

With the new-year a ſevere froſt ſet in, accompanied with a very violent ſtorm, which blew down ſeveral ſtacks of chimnies upon the houſes, and ſome even broke through the roof, and at times even penetrated to the ſecond ſtory, ſo as to occaſion much damage and calamity.

Among other favours, with which Sir JOSEPH BANKS overwhelmed me, I conſider this a ſingular proof of his friendſhip that I was permitted, previous to my departure, to view the Collection of Plants made from the iſlands in the Pacific Ocean, which were not as yet placed among the other plants, and are not ſhewn indiſcriminately to every ſtranger. Dr. SOLANDER, who, as well as Mr. DRYANDER, ſtrove to render my abode in London both agreeable and advantageous to me, had the goodneſs, on this occaſion, to order the whole of this Collection to be brought down from the upper ſtory, and to go through with me every ſingle and diſtinct ſpecies of it.

The Library, which Sir JOSEPH BANKS has collected, is in fact the completeſt in the world, with reſpect to Natural Hiſtory, both in old and new works. It is erected in a large ſeparate room, before you enter into the Cabinet, by

means of which one has a moſt incomparably fine opportunity, when one is examining any particular plant, of referring to, and conſulting whatever author one chuſes, without loſs of time, and without being under the neceſſity of fetching books from a general Library, which frequently ſtands at a great diſtance off, and is moſt commonly incomplete, and not always acceſſible.

January the 30*th*, I ſet off, in company with Captain, now Colonel Cronſtedt, who was lately returned from North America. We took our route through Holland and Germany to Yſtad and Lund. From Harwich we went acroſs the Channel to Helvoet Sluys, and from thence travelled on to Amſterdam, where we ſtaid a few days only.

February the 16*th*, we proceeded farther on our journey to Groningen: on the 22d to Bremen; from thence to Hamburg, on the 24th; then to Lubek, Wiſmar, Roſtock, Damgard, and Stralſund, where we arrived on the 2d of March.

Whilſt we waited for the ſailing of the Packet-boat to Yſtad, we made an excurſion to Gripſwald, in order to ſee this celebrated Seat of the Muſes, its Library, &c. and on our return, ſailed from Stralſund in the Packet-boat to Yſtad, and on the 14th following, arrived in our dear and long deſired native country.

THE END.

INDEX.

A.

Abraſin, 38.
Abu, 124.
Acheta, 100.
Acorus, 149.
Acu punctura, 73, 75.
Adamſberg, 236.
Adianthum, 147.
Agaricus, 89.
Agate, 105.
Agriculture, 54.
Agrimony, 146.
Agrion, 101.
AITON, 290.
ALBEDYL, 174.
Almanacks, 6.
ALNOOR, 171.
Alpinia, 250.
Amakuſa, 103.
Ambaſſador, 27, 238.
Amber, 105.
Ambergrife, 98.
Amethyſt, 218, 220, 221.
Amida, 24.
Amomum, 89, 147.
Amphibia, 99.
Anas, 99.
Anatomy, 55.
Andewalu, 161.
Anger, 171.
Anobium, 109.
Anomia, 102.
Ant-eater, 178.
Ape, Cingaleſe, 214.
Ape-ſtone, 248.
Apis, 101.
Aqua Mercurialis, 79.
Ara, 39.
Arca, 102.
Ardea, 99, 160.
Areca, 150.
Areek-Tree, 183.
Argonauta, 102.
Ariſtolochia, 185.
Arkidomas, 158.
Artemiſia, 74, 145.
Arum, 121, 149.
Arundo, 91.
Aſcenſion, Iſle of, 275.
Aſſeſſors, 69.
Aſter, 90.
Aſterias, 101.
Aſtromony, 55.
Atſingo, 104.

Atſaki, 88.
Auctions, 285.
Aukuba, 90.
Awa, 88.
Azalea, 90.
Azedarach, 38.

B.

Babouns, 272.
Baſin, 214.
Bamboos, 85, 91, 142, 160.
Bangle, 147.
BANKS, Sir Joſeph, 288, 292.
Barbary, 193.
Barley, 84, 86.
Barringtonia, 177.
Batavia, 129.
Batatas, 38, 84, 89.
Bath, warm bath, 158, 159.
Bathing, 175.
Bears, 84, 88.
—— French, 87.
BEAUMONT, 283.
BEEK, van der, 153.
Belemnites, 102.
BELLING, 263.
Belot, 145.
BENGAKKAR, 278.
BERGMAN, 229, 285.
Betel, 263.
Bezoar-ſtone, 233, 248.
Bidara Laut, 150.
Bignonia, 38, 249.
Biago, 104.
Binnuge, 186.
Birds, 98.
Biſen, 105.
Bitsju, 105.
BLADH, 171.
Blatta, 100.
Blind, 150.
—— order of, 28.
Boa kirai, 161.
BOENNEKEN, Dr. 139.
Boerhavia, 205.
Boga, 232.
Bogor, 162.
Bolange, 179.
BOLIN, 248.
Bombylius, 124.
Bombyx, 100.
Bong, 46.
Boobies, 268.
Boomjes, Iſlands of, 156.
Books, 177.
Boraſſus, 183, 205, 252.
Bor taurus, 97.
Botany, 55.
Bows, 113.
Braſſica, 87, 88, 93.
Bread fruit, 255—262.
Bridges, 12.
Brimſtone, 105.
Britiſh Muſeum, 289.
Buccinum, 102.
Buck-wheat, 84, 85.
Budha, Budſo, 19, 23, 187, 232.
Buffaloes, 97.

Buffles-blad, 141.
Bugios, 8.
Building, mode of, 142.
Bulla, 102.
Bungo, 30.
Bupreſtis, 100.
Burgomaſter, 69.
Burmanniâ, 247.
BURMANNUS, 134, 247, 283, 286.
Burning with Moxa, 74.
Buytenzorg, 158, 162.

C.

Caballe, 178.
Coleworts, 84.
Cole-ſeed, 84, 87.
Cactus, 90.
Calaminder-tree, 205.
Calebaſhes, 89.
Calendula, 90.
Callionymus, 100.
Caltere, 193.
Camellia, 38.
Camphor-tree, 92.
Canaan, 280.
Cancer, 101, 277.
Candles, 93.
Canes, 172.
Canis, 97.
Cannabis, 140.
Canons, 14.
Cape, 269, 270.
Capſicum, 89, 145.
Capuru Curundu, 236.
Cardamoms, 147, 250.
Cardium, 101.
Carrots, 88.
Caryota, 149.
Caſhiers, 69.
Caſſia, 149.
Caſſida, 100.
Caſtles, 10.
Cats, 95, 97.
Cat's-eyes, 219, 228.
Cayenne-pepper, 89.
Cedar, 91.
Celoſia, 90.
Cerambyx, 100.
Chabe, 147.
Chai, 147.
Chama, 102.
Champaca, 152.
Chelſea, 290.
Chalk-ſtone, 277.
Chemiſtry, 55.
Chenopodium, 145.
Cheribon, 136.
Cherries, 89.
Cherimelle, 178.
Cherroton, 163.
Cheſnut, 38, 90.
Cheſnut Curry, 258.
Chiluar, 158.
Chimangis, 158.
Chimbine, 146.
CHINAJOS, 9.
Chineſe, 164, 170.
——— Trade, 108.

Chipannas, 158.
Chipinong, 158.
Chiſeroa, 158.
Chriſtian doctrine, 30.
Chryſanthemum, 90.
Chryſalite, 218.
Chryſomela, 100.
Chryſopras, 218, 224.
Chundido, 258.
Churches, 21, 24.
Cicada, 124.
Cicindela, 100.
Cicuta, 149.
Cimex, 100.
Cinnamon, 194—204.
——— Stone, 218, 224.
Cities, 100.
Citrus, 118, 120.
Clematis, 146.
Climate, 160, 175.
Cloathing, 5.
Clupea, 29, 100.
Coals, foſſile, or pit, 105.
Coccinella, 100.
Cock, 99.
Cocoa, 191, 209.
Cochim, 239.
Coffee, 152.
——— plantations of, 249.
Coins, 117, 123, 124, 169, 210—214, 285.
Collections, 283, 285, 288, 289, 290, 292.
Columba, 99, 161.
Columbo, City of, 175.
Columbo Root, 185.
Commerce, 105.
——— articles of, 168.
Conflagration, 70.
Confections, 260.
CONFUCIUS, 34.
Conomon, 89.
CONRADI, 248.
Convolvulus, 84—89.
Conus, 102.
Copper, 59, 104, 125.
Corals, 101.
Coriander, 150.
Corn, ſalts of, 84.
Corvus, 99.
Coſtus, 146.
Cotton, 59, 91.
Cottons, 239.
Court, 5.
Cows, 95, 97.
CRAAN, 157.
Crabs, 39.
Crinum, 150.
CRONSTEDT, 293.
Crotalaria, 185.
Croton, 250.
Crow, 99.
Crown-fiſh, 277.
Crown-lands, 8.
Cryſtall, 219, 226—228.
Cucumbers, 89.
Cucumis, 89.
Cucurbita, 89.
Cudweed, 150.
Culex, 101.

Cupreſſus, 122.
Curcuma, 147.
Curry Caldu, 257.
—— Cheſnut, 258.
—— Seco, 257.
Cynogloſſum, 148.
Cynoſurus, 88.
Cyprus, 148.
Cyprœa, 102.
Cypreſs, 122.
Cyprinus, 100.

D.

Dadap, 153.
Daidſu, 88.
Daijosin, 113.
Daimio, 1.
Dairi, 3, 6, 17.
Dances, 143.
Dancing Girls, 51.
Dandang, 147.
Daucus, 88.
Dead, 53.
Death, penalty of, 64.
Dermeſtes, 100.
Deſima, 33.
Deutz, 284.
Devil's Rock, 156.
Diarrhæa, 77.
Dimboring, 145.
Dioſcorea, 123, 143.
Dioſpyros, 90.
Diſeaſes, 76.
Dogs, 95, 97.
Dolichos Soja, 38, 88, 121, 177.
Domolo, 145.
Donax, 101.
Dranguli, 149.
Drawing, art of, 57.
Dreſs, 5.
Drink, 39.
Drought, 271.
Dryander, 288, 293.
Dryandra, 38, 93.
Ducks, 95.
Dudu, 214.
Dukut parang, 146.
Duurkoop, 124, 164.
Duyvel's-boom, 232.
Dying Materials, 90.
Dyſentery, 77.

E.

Ear-rings, 189.
Eels, 99.
Eggs, 87.
Electrical Fluid, 265.
Elephant, 242—247.
———— Hunt, 241.
———— Toil, 240, 247.
Elinges chageppu, 219.
Embaſſy, 31.
Empade, 259.
Emperors, 12, 89.
England, 288.
Equus, 98.
Erythrina, 153.
Eyes, diſeaſe of, 76.

F.

FAHRÆUS, 287.
Fagara, 89.
FALCK, 174, 182.
Farnæa Muſi, 100.
Fans, 252.
Fanum, 213.
FEHRSEN, 269.
FEITH, 132.
Felis, 97.
Fences, 237.
Feſtivals, 46.
Ficus, 140, 232.
FIDE JURI, 32.
FIDE TADA, 112.
FIGASI *gamma no yn*, 9.
Figs, 90, 140.
Fines, 6.
Fios, 260.
Fir, 122.
Firando, 112.
Fires, apparatus againſt, 10.
Fiſh, 100.
Fiſhermen, 126.
Fiſtularia, 100.
FLOBERG, 287.
Fokke fokkes, 89.
Food, preparation of, 35.
forced-meat-balls, 259.
Fornication, 52.
FORSTER, 290.
FOTHERGILL, 290.
Fox, 97.
Fragaria, 146.
FROBUS, M. 190.
Fucus, 276.
Fumaria, 145.
Funerals, 51, 53.
Furniture, 64.

G.

Gale, 194, 263, 264.
Games, 46.
Gardens, 89.
Gardenia, 90.
Garnets, 218.
Geeſe, 98.
Ginger, 147.
Ginko, 38.
Ginje, 148.
Genſima, 104.
Glands, indurated 76.
Glaſs, 59.
—— grinding of, 60.
Glimmer, 217.
Gnats, 144.
Gnaphalium, 150.
Goa, 31.
Goats, 95.
Gobius, 99.
Godagandu, 235.
Gold, 102.
Gold-chains, 190.
Goſſypium, 91.
Gotho, 92.
Government, 1, 9.
Governors, 126, 138.
Grapes, 90.
Graſs, 88.

Green Tea, 41.
Gregory XIII. 31.
Gryllus, 100.
Guard, 10, 70.
——— houſe, 10.
Guns, 13.

H.

Haarlem, 284, 285.
Hague, The, 288.
Haliotis, 82, 102.
Hamagai, 102.
Hare, 27.
Hasselgren, 287.
Helena, Iſle of, 275.
Helvoetſluys, 288.
Hemerobius, 101.
Hens, 95, 99.
Herpes, 236.
Herelli, 258.
Hibiſcus, 120, 146, 246.
Hirudo, 232.
Hirundo, 163.
Hiſter, 100.
Hiſtory, 54.
Hoffman, Dr. 129, 167.
Holeus, 88.
Holidays, 24—26.
Hopner, 174.
Hops, 90.
Hordeum, 86.
Horſes, 9.
Hoſpital, 165.
Hoven ten, 284.
Hovenia, 90.
Humulus, 90.
Hyacinth, 218, 222.
Hydrocele, 76.
Hydrocephalus, 77.
Hyſtrix, 233.

I.

Jacberi, 185.
Jacatra, 168.
Jambal, 261.
Jamanabos, 28.
Jan Lopes root, 205.
Japara, 153.
Jarrak, 149, 192.
Jaſſiminum, 150.
Jatropha, 149, 192.
Idols, 18, 21.
Jedo, 7.
Jemma, 24.
Jeſſamin, 150.
Imhoff, 158.
Impatiens, 90.
Impoſts, 67.
Inaba Mino, 113.
Ink, Indian, 58.
Inns, 11, 113, 192.
Intermaga, 156.
Ipecacuanha, 186.
Iron, 59, 127.
——— Ore, 217.
Iſle, 16, 26.
Iſis, 102.
Itch, 234.
Juana, 138, 155.
Julus, 101.

Juncas,

Juncus, 119.
Iwa Kik, 102.

K.

Kadondon, 161.
Kæmpfer, 8, 16, 133, 290.
Kæmpferia, 147.
Kaha palinga, 219.
Kaki ular, 150
Kaki Figs, 38.
Kallu palingu, 219.
Kalu miniran, 217.
Kamadu, 140.
Kambang Pokul Ampat, 148.
Kami, 21.
Kaneke turemalai, 219.
Karte-palingu, 219.
Kattami, 104.
Katumjar, 150.
Kellingo, 179.
KEULEN, Van, 174.
Kibi, 88.
KJELLIN, 174.
KINSOHIVO TEI, 88.
Kinſima, 144.
KLEIN, 278, 279.
Klengengang, 196.
KLOCHNER, Dr. 285.
Ko Kibi, 88.
KOELBIER, 280.
Komedegam, 218.
Komukus, 148.
Kopping, 140.
Kooli, 34.
Korang garing, 161.
KOSAK, 123.
Koto, 58.
Kubo, 1, 6—9, 22.
Kunjet, 147.
Kunir, 147
Kyno Kuni, 104.

L.

Lac, Gum, 250.
Lacerta, 99.
Lacker'd Ware, 61.
Lactuca, 89, 145.
Lagundo, 146.
Lamps, feſtival of, 124.
Lampujang, 147.
Lampyris, 100.
Lan Karate, 218.
Language, 55.
Lanthorn, feſtivals of, 46, 124.
Laryn, 210.
Laurus, 91, 93.
Law, Study of, 55.
Law, 62, 71.
Learning, 5.
LEE, Mr. and Miſs, 290.
Leeches, 232.
Lemons, 38, 89.
Leonurus, 38, 146.
Lepiſma, 101.
Lepus, 101.
Lettuces, 89.
LEVER's Muſeum, 289.
Library, 292.

Lichens, 161.
Licuala, 25, 253.
Lignum colubrinum, 150, 210.
Lilium, 119.
Lizards, the, 280.
Lombo, 145.
London, 289.
Loo, the Ship, 173, 264.
Lophius, 277.
Loxia, 99, 169.
LUNGE, 287.
Lute, 58.
Lycoperdon, 121.
LYONET, 288.

M.

Mactra, 102.
Madrepora, 102.
Magnoliæ, 90.
Malabar numeration, 253.
Mammalia, 98.
Man of War, 280.
Manjel palingu, 2[illegible]
Manikan, 146 [illegible]19.
[illegible]
Manis, 178.
Mantis, 97.
Manure, 82.
Manufactures, 59.
Marendan, 183.
Maritjo, 148.
Marmelle, 179.
Marriages, 51.
Mars, the Ship, 170.
Mats, 119.
Matsuri, 46.
Mature, 190.
Maturese Diamond, 218.
Meadows, 81.
Measles, 77.
Medicine, 55.
Medlars, 89.
Mehemedon, 161.
Melia, 93.
Melilothus, 148.
Meloe, 100.
Melons, 89.
Mendi, 236.
Menispermum, 185.
Merchants, 106.
Mespil[illegible]
Metals[illegible]s, 89.
MEU[illegible], 102.
Mia[illegible]LEN, vander, 28.
[illegible] 21.
Miaco, 4.
Mica, 217.
Miliary Eruption, 77.
Mimasaka, 105.
Mines, farming out, 231.
Miniran, 217.
Mirabilis, 90, 148.
Mirror, 26.
Miso Soup, 38, 88.
Mojei, 147.
MOMO *Zo no Yn*, 9.
MONSO[illegible], Lady, 290.
Monoculus, 101.
Moo[illegible]u, 56.
Mors, 188, 230.
Mortality, 56.

Mordella,

Mordella, 100.
Moringa, 205.
MORO, 33.
Morus, 61.
Monks, 28.
Mountains, 138, 158, 163.
Mountain Cryſtal, 218, 219.
Mugwort, 74, 145.
Mulberry-tree, 60.
Muræna, 99.
Mus, 38.
Muſa, 172.
Muſca, 102.
Muſci, 161.
Muſhrooms, 38, 89.
Muſic, 58.
Muſical Inſtruments, 58.
Mya, 101.
Myrica, 122.
Mytilus, 102.

N.

Na tanne, 87.
Navigation, 63.
Negumbo, Devil of, 78.
NAGATO *no Kami*, 126.
NAKA *no Mikado no Y'n*, 8.
Namba, 105.
Naban, 88.
Nandina, 90.
Natural philoſophy, 35.
Nerita, 102.
New-year, 132, 153.
Nettles, 140.
Niembela, 258.
Nile Nilim, 218.
Nile turemali, 218.
Ninban, 69.
Nin O, 2.
NOTO *no Kami*, 126.
NOUR-MAHAL, 286.
Nunneries, 30.
Nyctanthes, 151.

O.

Oath, 77.
Ocymum, 149.
Oils, 38, 84, 87, 93, 203, 204, 209.
Oniſcus, 101.
Oo, 3.
Ophicthus, 99.
Ophiogloſſum, 237.
Ophiorhiza, 150, 200, 236.
Ophioxylon, 235.
Oranges, China, 39, 89, 120.
—— Seville, 39, 89.
—— Outang, 160.
Orang o
Order, 68.
Orders, 28, 30.
Oſtrea, Oyſters, 39.
Oſtracion, 100.
Ottona, 10, 69.
Owari, Prince of, 124.
Oxalis, 145.
Oxen, 95, 192.

P.

Pediculus, 162.
Pæonia, 90.

Pagoda

Pagoda, 211, 212.
Palanquin, 191.
Pancakes, 260.
Panicum, 88.
Panningai, 179.
Panorpa, 101.
Paper, 62, 150.
Papilio, 100.
PARRA, van der, 130.
Pafs, 182.
Patella, 120.
PATERSON, 271.
Patti, 153.
Patje Padjan, 218.
Patje turemali, 218.
Payam China, 145.
Peas, 84, 88.
Peaches, 89.
Pearl-fifhery, 262.
Pears, 38, 89.
Pediculus, 101.
Pei, 261.
Pelicanus, 268.
PENNANT, 237.
Penne turemali, 218.
Pepper-fhrub, 89.
Perca, 39, 100.
Perficaria, 146.
PETTERSEN, 171.
Phalæna, 285.
Phafeolus, 87, 88.
Phyficians, 77.
Pigeon, 99.
Pilgrims, 27, 28.
Pinna, 122.
Pine, 91.
Pinus, 91, 122.
Piper, 147, 148, 150.
Pifang, 172.
Pifum, 88.
Plantago, 149.
Plays, 49.
Plumbago, 212.
Poetry, 58.
Police, 64.
POLL, van der, 234.
Pollos, 256, 258, 259.
Polygonum, 85, 90, 123.
Pomgranates, 80.
Pondogede, 158, 162.
Porcellain China, 108.
Porcupine, 233.
Portugueſe, 31, 109, 186.
Poſt-houſe, 11.
Potatoes, 89.
Poterium, 150.
Praſts, 18, 22, 23, 254.
Primes, 1, 9.
Printing, art of, 57.
——— Preſs, 177.
Priſon, 67.
Prunus, 90.
Pſeudo-opal, 219.
Ptinus, 100.
Pulex, 101.
Pumpkins, 89.
Punica, 90.
Puresjerajen, 218.
Puſperagan, 218.
Pyralis, 101.

Q.

Quadrupeds, 94.
Quails, 99.

R.

RADERMACHER, 130, 132, 133, 167, 249.
Radiſhes, 88.
Radix Columbo, 185.
Raja, 100.
Rain, 131.
Rainbow, 266.
RANTZOW, 215, 216, 232, 237.
Ranunculus, 146.
Raphanus, 88.
Rat, 97.
Rawa, 218.
Red dog, 77.
Religion, 17, 168.
Rheumatiſms, 76.
Rhinoceros's-horn, 210.
Rhus, 38, 62, 91, 93.
Rice, 37, 84, 249.
Ricinus, 118, 149.
RIEMSDYK van, 136.
Roads, 11, 12.
Robal, 218, 222.
Rockia, 237.
Rollewai, 214.
Roſary, 29.
Rotecubung, 147.
Rubus, 145.
Ruby, 218, 219, 220.
Rumpung, 145.
Rupees, 211, 285.
Rye, 84.

S.

Saccharum, 148.
Sacſander, 185.
Sado, 130.
Sagittaria, 123.
Sago, 149.
—— Tree, 149.
Sakki, 37, 39, 40.
SAKKURA *Matje no Yu*, 8.
Salicornia, 146.
Salatiga, 138.
Salmo, 100.
Salmon, 39.
Salplicat, 62.
Samangi Kunong, 145.
Samarang, 137, 138, 144.
Sambucus, 150.
Sanicula, 145.
Saphire, 218, 219, 223, 226.
Sargazo, 276.
Satſuma, 92, 103, 105.
Scarabæus, 100.
Schænanthus, 146.
Schools, 59.
Sciæna, 100.
Sciences, 57.
Sciurus, 237.
Scolopendra, 234, 266.
Scolopendrium, 145.
Scorpion, 234.

Scuandi,

Scuandi, 218.
Scyllæa, 277.
Scymitar, 14.
Sea-Cocoa, 183, 209.
Secretary, 69.
Sects, 17.
Selim, 286.
Semi, 124.
Sempu, 147.
Senki, 76.
Sepia, 101.
Seroni, 145, 147.
Serpents, 206.
——— bite, 235, 236.
——— Stone, 207, 208.
——— Tree, 235.
Serpula, 102.
Seſamum, 38, 93.
Shaddocks, 39, 89.
Sheep, 95.
Shell-fiſh, 39, 101.
Shingles, 236.
Shrimps, 39.
Sida, 150.
Sigak, 102.
Silk, 59.
—— culture of, 91.
Silpha, 100.
Silver, 101, 102.
Silurus, 100.
Simia, 214, 248.
Simina, 146.
Sin, 21.
Sinto, 19.
Siomio, 1.
Sire, 146.
Situwaka, 238.
Sium, 88.
Sjuto, 34.
Skirrets, 88.
Slangenhout, 235.
Slaves, 250, 264.
SLOANE, 290.
SLUYSKEN, 240.
Slymapels, 179.
Smylax, 146.
Smugglers, 66.
Society, Royal, 291.
SOLANDER, Dr. 288, 292.
Solanum, 38, 89, 147, 178.
Solen, 101.
Sombong Madur, 159.
Sonchus, 145.
Soobo, 156.
Sour-ſack, 255.
Sowas, 59.
Soy, 107, 121.
Spaniſh Figs, 109.
Sphinx, 100.
Spireæ, 90.
Spondylus, 102.
Spran, 145.
Sports, 143.
Squirrels, 237.
Stahlſtein, 217.
Staveniſſe, 124.
Steel, working of, 60.
Steenbraſem, 39.
Stink-tree, 234.
Stockholm's Slot, 171.

Stomoxys, 101.
Stones, precious, 216, 230. 231.
Storm, 281, 292.
Strombus, 122.
Strunthout, 234.
STUTZER, 134.
Sudu padjan, 219.
Sudu palingu, 219.
Sudu turemali, 219.
Sugar, 93.
——— Canes, 148.
——— Maple, 93.
Surveying, 57.
Surunga, 103, 104.
Sus, 98.
Suwa, 47.
Swallows, 163.
SWART, 287.
Swine, 95, 98.
Syngnathus, 100.

T.

Tagal, Mount, 136.
Tagetes, 90.
Tai, 3.
Taiko Lamma, 7.
Tamarindus, 149.
Tampal utan, 161.
Tango no Kami, 126.
Tanjong, 157.
Taripo, 219, 227.
Tavarcare, 209.
Taxes, 8, 67, 68.
Taxus, 38, 122.
Tay, 39.
Tea-Tree, 42, 91.
Tea Trade, 107.
——, Preparation of, 41.
Tebu, 148.
Tellina, 101.
Temples, 21, 22, 26—28.
TENSIN, 3.
TENSIO DAI SIN, 226.
Testudo, 99.
Tetrao, 99.
Tetraodon, 100.
Texel, 283.
Threshing, 85, 87.
Tigers, 162.
Tillia Palingu, 219.
Tingling mintik, 161.
Tipula, 101.
Titles, 5.
Tobacco, 43, 44.
Tommegom, 152.
Topaz, 218, 219, 224.
Tortrix, 101.
Tourmalin, 218, 219, 222, 223, 224, 225.
Towns, 10, 11, 60.
Town Officers, 69.
Travelling, mode of, 11.
Treba, 148.
Trees, sort of, 118.
Triticum, 86.
Trochus, 102.
Truffles, 121.

Tsikumgo,

mgo, 103.
aki, 38.
pora, 122.
ang, 141.
o, 102.
neric, 147.
eps, 84.
le doves, 161.

U.

ilicus veneris, 102.
ang, 139.
orn's Teeth, 126.
:ornu, 126.
n upan Karpo, 146.
1 upan Sarpi, 148.
ne, 234.
:a, 118, 140, 146.
atje, 189.
ia, 129.

V.

ish, 62, 265.
— Tree, 92.
real disease, 78.
is, 101.
sina, 101.
101.
8.
's bloem, 148
Villages, 11.
Vitex, 146.
Vitis, 90.
Voluta, 102.
Vows, 29.
Vreedlust, 135.
Vriend, 285.

W.

Wairodi, 219.
Walnuts, 9.
War, art of, 56.
Warreku, 256.
Watch, 10.
——— house, 10, 70.
Water, diminution of, 155.
——— Nuts, 38.
——— Spouts, 267.
——— Saphire, 219.
Weapons, 13.
Whale-bones, 98.
Whales, 98.
Wheat, 84, 86.
WILLIAM V. 173.
Wille padjan, 219.
Wille palingu, 219.
Wilunde Wenne, 247.
WIMMERCRANTZ, 157, 249.
Winds, 136.
Worms, 101.
Writing, mode of, 58.
WURMB, van, 157.

INDEX.

Y.

YE FAI KOO, 9.
YE NOB KOO, 9.
YE SIEGE *Kao*, 9.
YE TSU KU *Kao*, 9.
Ye Varu, 7.
YORITOMO, 6, 7.
YOSI MUNE *Koo*, 9.

Z.

ZENTOOGOZIO, 9.
Zeeduyn, 124.

00086241

Digitized with financial assistance from the
Government of Maharashtra
on 02 July, 2018